

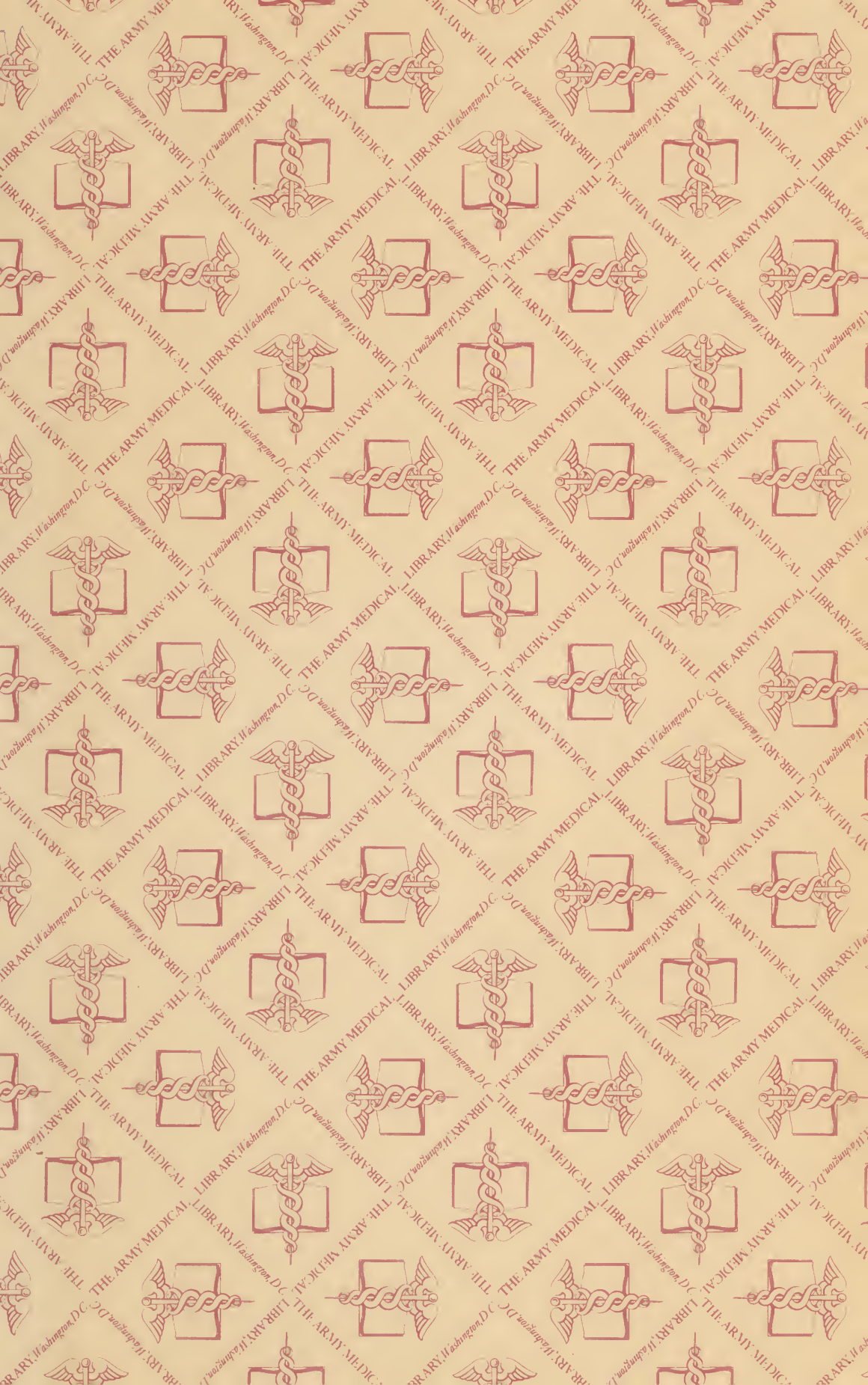
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J. MANCON
DESCRIPTIVE ANATOMY OF THE HUMAN
BODY FORMING A TEXT BOOK TO THE
ATLAS OF HUMAN ANATOMY

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JEANCON (J. A.)

Part 1.

Descriptive Anatomy

OF THE

HUMAN BODY,

FORMING

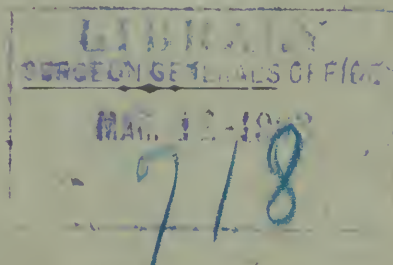
A TEXT BOOK

TO THE

ATLAS OF HUMAN ANATOMY.

BY

J. A. JEANCON, M. D.



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EXPLANATION OF PLATES.

OSTEOLOGY.

PLATES I, II, III.

PLATE I, MALE SKELETON—ANTERIOR VIEW.

“ II, MALE SKELETON—POSTERIOR VIEW.

“ III, FEMALE SKELETON—ANTERIOR VIEW.

A. Cranium.	28. Scapula.	
B. Vertebral Column.	29. Humerus.	
C. Thorax.	30. Ulna.	
D. Upper Extremity.	31. Radius.	
E. Lower Extremity.	32. Scaphoid	} Bones of the Carpus.
1. Sphenoid.	33. Semi-lunar	
2. Occipital.	34. Cuneiform	
3. Temporal.	35. Pisiform	
4. Parietal.	36. Trapezium.	
5. Frontal.	37. Trapezoid	
6. Ethmoid.	38. Os Magnum	
7. Lachrymal.	39. Unciform	
8. Inferior Turbinated.	40. Metacarpal Bones.	
9. Superior Maxillary.	41. First Row of Phalanges.	
10. Palate.	42. Second “ “ “	
11. Malar.	43. Third “ “ “	
12. Nasal.	44. Sessamoid Bones.	
13. Inferior Maxillary.	45. Ilium	} Bones of Pelvis.
14. Atlas.	46. Pubis	
15. Axis.	47. Ischium	
16. Cervical Vertebrae.	48. Femur.	
17. Dorsal Vertebrae.	49. Patella.	
18. Lumbar Vertebrae.	50. Tibia.	
19. Sacrum.	51. Fibula.	
20. Coccyx.	52. Os Calcis	} Bones of the Tarsus.
21. Seven Superior or True Ribs.	53. Astragalus	
22. Five Inferior or False Ribs.	54. Scaphoid	
23. Costal Cartilages.	55. Internal Cuneiform	
24. Manubrium	56. Middle “	
25. Gladiolus	57. External “	
26. Xyphoid Cartilage	58. Cuboid	
27. Clavicle.	59. Metatarsal Bones.	

- | | |
|----------------------------------|-------------------------------------|
| 60. First Row of Phalanges. | z. Internal Condyle of the Humerus. |
| 61. Second " " " | a. Olecranon Process |
| 62. Third " " " | β . Coronoid Process |
| 63. Sessamoid Bones. | γ . Head |
| a. Mastoid Process. | δ . Styloid Process |
| b. Zygoma. | ϵ . Head |
| c. Superciliary Ridge. | ζ . Tuberosity |
| d. Zygomatic Process of Frontal. | η . Styloid Process |
| e. Frontal Process of Sphenoid. | θ . Crest of the Ilium. |
| f. Inferior Nasal Spine. | i . Anterior Superior Spi- |
| g. Angle | nous Process |
| h. Coronoid Process | x. Anterior Inferior Spi- |
| i. Condylod Process | nous Process |
| k. Chin. | λ . Posterior Superior Spi- |
| l. Body. | nous Process |
| m. Transverse Processes | μ . Spine of the Ischium. |
| n. Articular Processes | ν . Acetabulum. |
| o. Spinous Process | \omicron . Symphysis Pubis. |
| p. Anterior Sacral Foramina. | π . Obturator Foramen. |
| q. Posterior Sacral Foramina. | ρ . Tuberosity of the Ischium. |
| r. Spine | σ . Head |
| s. Acromion Process | τ . Trochanter Major |
| t. Coracoid Process | χ . Trochanter Minor |
| u. Head | υ . External Condyle |
| v. Head | φ . Internal Condyle |
| w. Greater Tuberosity | ξ . Tuberosities of the Tibia. |
| x. Lesser Tuberosity | ϕ . External Malleolus. |
| y. External Condyle | ω . Internal Malleolus. |

PLATE IV.

THE SKELETON OF AN INFANT.

The nomenclature of this figure is the same as that of the foregoing, excepting:—

F. Anterior Fontanelle.

24. Center of Ossification of Manubrium.

25. Centers of Ossification of Gladiolus.

26. Cartilaginous Ensiform Appendix.

32. Unossified Carpus.

52. Unossified Tarsus.

The Os Frontis (Fig. 5) consists

of two lateral halves.

The Superior and Inferior Maxillaries (Figs. 9 and 13) lack the alveoli.

The bodies of the Vertebrae (*B*) are all of a size, the Spine being about as large in the Cervical as in the Lumbar region.

The Transverse Processes (*m*) are hardly developed. The Spinous Processes are absent altogether, and the whole Vertebral column consists of two lateral halves (*o*).

PLATE V.

FIGS. I TO VIII. DEVELOPMENT OF THE FŒTAL SKULL.

- | | |
|---|-----------------------------------|
| Fig. I. At the beginning of Second month. | iv. Parietal Bone. |
| Fig. II. End of same. | v. Frontal Bone |
| Fig. III. First half of Third month. | a. Frontal Portion. |
| Fig. IV. Second half of same. | b. Orbital Portion. |
| Fig. v. At end of Fourth. | c. Nasal Portion. |
| Fig. VI. At end of Fifth. | vi. Ethmoid Bone. |
| Fig. VII. At end of Seventh. | vii. Lachrymal Bone. |
| Fig. VIII. At end of Ninth month. | viii. Superior Maxillary Bone. |
| i. Sphenoid Bone. | ix. Malar Bone. |
| ii. Occipital Bone. | x. Palate Bone. |
| a. Occipital Portion. | xi. Nasal Bone. |
| b. Condylod Portion. | xii. Inferior Maxillary Bone. |
| c. Basilar Portion. | A. Anterior Fontanelle. |
| iii. Temporal Bone. | B. Posterior Fontanelle. |
| a. Squamous Portion. | C. Posterior Temporal Fontanelle. |
| b. Mastoid Portion. | D. Anterior Temporal Fontanelle. |
| | 20. Tympanic Bone. |

AD. FIG. VIII.

- | | |
|--|--|
| 9. External Occipital Protuberance. | 32. Superciliary Ridge. |
| 10. External Occipital Spine. | 36. Malar or External Angular Process. |
| 12. Zygomatic Process of Temporal. | 63. Frontal Process of Malar. |
| 23. Anterior Superior Angle of Parietal. | 69. Body of Inferior Maxillary. |
| 24. Posterior Superior Angle of same. | 70. Ramus of Lower Jaw. |
| 25. Posterior Inferior Angle of same. | 75. Sigmoid Notch. |
| 26. Anterior Inferior Angle of same. | 76. Condylod Process. |
| | 77. Neck of same. |
| | 78. Coronoid Process. |
| | 79. Angle of Lower Jaw. |

FIG. IX. ADULT SKULL—SIDE VIEW.

- | | | |
|--------------------------|--|-------|
| 1. Parietal Bone. | 12. Chin. | [Jaw. |
| 2. Frontal. | 13. Lower Border of Body of the | |
| 3. Occipital. | 14. Angle of Lower Jaw | |
| 4. Lambdoid Suture. | 15. Posterior Border of Ramus. | |
| 5. Coronal Suture. | 16. Supraorbital Foramen. | |
| 6. Nasal Eminence. | 17. 17. Temporal Ridge. | |
| 7. Nasal Bones. | 18. Squamous Portion of Temporal. | |
| 8. Anterior Nares. | 19. Squamous Suture. | |
| 9. Anterior Nasal Spine. | 20. Anterior Inferior Angle of Parietal. | |
| 10. Upper Teeth. | 21. Zygomatic Surface of Sphenoid. | |
| 11. Lower Teeth. | | |

- | | |
|--|------------------------------------|
| 22. External Angular Process of Frontal. | 28. Zygomatic Process of Temporal. |
| 23. Malar Bone | 29. Sigmoid Notch. |
| 24. Lachrymal Bone. | 30. Condyle of Lower Jaw. |
| 25. Orbital Surface of Sphenoid. | 31. Coronoid Process of Lower Jaw. |
| 26. Orbital Surface of Upper Maxillary. | 32. Styloid Process of Temporal. |
| 27. Infraorbital Foramen. | 33. Mastoid Process. |
| | 34. Occipital Groove. |
| | 35. Masto-occipital Suture. |

PLATE VI.

FIGS. I TO XX. MICROSCOPIC STRUCTURE OF THE BONE.

- | | |
|---|---------------------------------------|
| { | FIG. I. LONGITUDINAL SECTION OF ULNA. |
| | FIG. II. TRANSVERSE SECTION OF SAME. |

- | | |
|-------------------------------|----------------------------|
| <i>a.</i> Cartilaginous Base. | <i>d.</i> Canaliculi. |
| <i>b.</i> Haversian Canals. | <i>e.</i> Bone Corpuscles. |
| <i>c.</i> Their Lamella. | |

FIG. III. TRANSVERSE SECTION OF COSTAL CARTILAGE.

- | | |
|------------------------------------|-------------------------------------|
| <i>a.</i> Intercellular Substance. | <i>c.</i> Cells containing Neuclei. |
| <i>b.</i> Cartilage Cells. | |

FIG. IV. SECTION OF CARTILAGE OF EAR.

- | | |
|----------------------------|--|
| <i>a.</i> Cartilage Cells. | <i>b.</i> Fibrous Intercellular Substance. |
|----------------------------|--|

FIG. V. SECTION OF INTERVERTEBRAL SUBSTANCE.

- | | |
|----------------------------|--|
| <i>a.</i> Cartilage Cells. | <i>b.</i> Fibrous Intercellular Substance. |
|----------------------------|--|

FIG. VI. TRANSVERSE SECTION OF BONE.

- | | |
|---------------------------|---------------------------------------|
| <i>a. b.</i> Osteoblasts. | <i>c.</i> Opening of Haversian Canal. |
|---------------------------|---------------------------------------|

FIG. VII. BONE FORMATION.

- | | |
|--|---------------------------|
| <i>a. b.</i> Osteoblasts in different stages of formation. | <i>a.</i> Mononeucleated. |
| | <i>b.</i> Polyneucleated. |

FIG. VIII. LONGITUDNAL SECTION.

Position of Osteoblasts around a vessel in the process of ossification.

FIG. IX. SECTION OF LONG BONE.

- | | |
|--------------------|---|
| 1. Marrow Cavity. | 5. Diaphysis. |
| 2. Periosteum. | 6. 8. Articular Surfaces showing Articular Cartilage. |
| 3. Compact Tissue. | 7. Diaphyso-epiphysal Line. |
| 4. Epiphysis. | |

FIG. X. SECTION OF CERVICAL VERTEBRA.

a. Outer Compact Tissue. *b.* Spongy Tissue. *c.* Inner Compact Tissue.

FIG. XI. SECTION OF LONG BONES, SHOWING COURSE OF NUTRIENT VESSELS.

1. Nutrient Vessel.		3. Compact Tissue.
2. Descending Branch.		4. Medullary Cavity.

FIG. XII. SECTION OF CRANIAL BONE.

a. External Table. *b.* Diploe. *c.* Inner or Vitreous Table.

FIG. XIII. FÆTAL PELVIS—SIDE VIEW.

1. Sacrum and Coccyx.		5. Acetabulum.
2. Ilium.		6. Obturator Foramen.
3. Ischium.		7. Antero-posterior Diameter.
4. Pubes.		8. Pelvic Axis.

FIG. XIV. SAME—FRONT VIEW.

1. Sacrum.		5. Pubes.
2. Coccyx.		6. Ischium.
3. Ilium.		7. Ilio-pectinal Line.
4. Sacro-sciatic Notch.		8. Acetabulum.

FIG. XV. OS INNOMINATUM, SEPARATED INTO ITS THREE DIVISIONS.

1. Ilium. 2. Ischium. 3. Pubes.

FIG. XVI. FÆTAL STERNUM—ANTERIOR SURFACE.

1. Manubrium.		4. Fourth Intercostal Space.
2. Second } Intercostal Spaces.		5. Costal Cartilage of Seventh Rib.
3. Third }		6. Ensiform Appendage.

FIG. XVII. FÆTAL THORAX—FRONT VIEW.

FIG. XVIII. SAME—SIDE VIEW.

1. First Rib. 2, 3. Thoracic Line. 4, 4. Dorsal Vertebrae.

FIG. XIX. FÆTAL SACRUM AND COCCYX.

FIG. XX. FÆTAL RIB—SUPERIOR ASPECT.

1. Head.		3. Shaft Angle.
2. Tubercle.		4. Sternal Extremity.

PLATE VII. FIGS. I TO X.

FIG. I. INFERIOR MAXILLARY BONE—OUTER ASPECT.

1. Symphysis.		3. External Oblique Ridge.
2. Mental Process.		4. Mental Foramen.

- | | |
|-----------------------------|--------------------------------------|
| 5. Inferior Border of Body. | 11. Inferior Dental Foramen. |
| 6. Angle. | 12. Sockets of Lateral Incisors. |
| 7. Coronoid Process. | 13. Sockets of Canines. |
| 8. Sigmoid Notch. | 14. Sockets of Bicuspids. |
| 9. Condyle. | 15, 16, 17. Sockets of three Molars. |
| 10. Neck. | . |

FIG. II. SAME BONE—INNER SURFACE.

- | | |
|--------------------------------|---------------------------------------|
| 1. Symphysis. | 8. Alveolar Process. |
| 2. Genial Tubercles. | 9. Inferior Dental Foramen. |
| 3. Depression for Digastricus. | 10. Condyle. |
| 4. Sublingual Fossa. | 11. Neck. |
| 5. Mylo-hyoidean Ridge. | 12. Sigmoid Notch. |
| 6. Lower Border of Body. | 13. Coronoid Process. |
| 7. Angle. | 14. <i>Posterior Border of Ramus.</i> |

FIG. III. SAME BONE—INFERIOR DENTAL CANAL, AND ROOTS OF THE TEETH EXPOSED.

- | | |
|----------------------|---|
| 1. Condyle. | 4, 5. Inferior Dental Vessels and Nerves. |
| 2. Coronoid Process. | |
| 3. Sigmoid Notch. | 6, 6. Their distribution to the fangs of the Teeth. |

FIG. IV. FŒTAL INTERIOR MAXILLARY, SHOWING THE DENTAL SACS OR TEETH GERMS.

- | | |
|-------------------------|-------------------------------|
| a. Alveolar Border. | c. Symphysis and Dental Sacs. |
| b. Lower Border of Jaw. | d. Coronoid Process. |

FIG. V. SAME BONE, SHOWING MILK TEETH.

- | | |
|------------------------|--------------------------------|
| 1. Condylloid Process. | 5. First Milk Molar. |
| 2. Coronoid Process. | 6. Second Milk Molar. |
| 3. Incisors. | 7. Alveoli of Permanent Teeth. |
| 4. Canine. | |

FIG. VI. SAME BONE OF A FŒTUS—SUPERIOR ASPECT.

- | | |
|--------------------------------------|-------------------------------|
| 1. Symphysis. | 4. Sigmoid Notch. |
| 2, 2, 2, 2, 2, 2. Sockets for teeth. | 5. Condyle. [Canal. |
| 3. Coronoid Process. | 6. Opening of Inferior Dental |

FIG. VII. SAME BONE, FŒTAL, BEFORE THE APPEARANCE OF THE ALVEOLAR PROCESS.

- | | |
|-------------------------------|----------------------|
| 1. Symphysis. | 5. Condyle. |
| 2. Lower Border of Jaw. | 6. Sigmoid Notch. |
| 3. Angle. | 7. Coronoid Process. |
| 4. Posterior Border of Ramus. | 8. Alveolar Border. |

FIG. VIII. UPPER AND LOWER JAWS IN POSITION, SHOWING THEIR MODES OF ARTICULATION, AND POSITION OF TEETH.

- | | |
|-----------------------------------|--------------------------------|
| 1. Superior Border of Nasal Bone. | 11. Frontal Process of same. |
| 2. Superior Border of Nasal Pro- | 12. Zygomatic Process. |
| 3. Frontal Bone. [cess. | 13. Condyle of Lower Jaw. |
| 4. Margin of Spheno-maxillary | 14. Sigmoid Notch. |
| Fissure. | 15. Posterior Border of Ramus. |
| 5. Nasal Bone. [lary. | 16. Lower Border of Body. |
| 6. Nasal Process of Upper Maxil- | 17. Symphysis. |
| 7. Infraorbital Foramen. | 18, 19. Incisors. |
| 8. Anterior Nares. | 20. Canine. |
| 9. Anterior Nasal Spine. | 21, 22. Bicuspid. |
| 10. Malar Bone. | 23, 24, 25. Molars. |

FIG. IX. UPPER JAW—INFERIOR ASPECT.

- | | |
|-------------------------------------|-------------------------------|
| 1. Nasal Process. | 9. Posterior Nasal Spine. |
| 2. Anterior Nasal Spine. | 10, 11. Incisors. |
| 3. Infraorbital Foramen. | 12. Canine. |
| 4. Malar Bone. | 13, 14. Bicuspid. |
| 5. Zygomatic Process. | 15, 16, 17. Molars. |
| 6. Anterior Palatine Foramen. | 18. Posterior Dental Foramen. |
| 7. Hard Palate. | 19. Hamular Process. |
| 8. Horizontal Plate of Palate Bone. | |

FIG. X. MALAR BONE—ORBITAL PROCESS, SUPERIOR SURFACE.

- | | |
|------------------------------|-------------------------------|
| 1. Superior Angle. | 5. Superior Maxillary Border. |
| 2. Anterior Angle. | 6. Border of Spheno-maxillary |
| 3. Anterior Superior Border. | Fissure. |
| 4. Orbital Surface. | 7. Sphenoidal Surface. |

PLATE VIII.

FIG. I. LEFT PALATE BONE—EXTERNAL ASPECT.

- | | |
|-------------------------------|-------------------------------------|
| 1. Rough surface for Superior | 6. External facet of Zygomatic Sur- |
| Maxillary. | 7. Spheno-palatine Notch. [face. |
| 2. Its Anterior Border. | 8. Posterior Palatine Canal. |
| 3. Smooth Zygomatic Surface. | 9. Tuberosity. |
| 4. Sphenoid Process. | 10. Posterior border joining Inter- |
| 5. Orbital Process. | nal Pterygoid Plate. |

FIG. II. SAME BONE—INTERNAL SURFACE.

- | | |
|----------------------------------|------------------------------|
| 1. Sphenoidal Surface of Orbital | 3. Sphenoidal Process. |
| Process. [cess. | 4. Spheno-palatine Notch. |
| 2. Ethmoidal Surface of same Pro | 5. Superior Turbinate Crest. |

- | | |
|-------------------------------|-----------------------------------|
| 6. Middle Meatus. | 10. Internal Border of Horizontal |
| 7. Inferior Turbinated Crest. | Plate. |
| 8. Inferior Meatus. | 11. Anterior portion of Vertical |
| 9. Tuberosity. | Plate. |

FIG. III. SAME BONE—ANTERIOR BORDER.

- | | |
|--|----------------------------------|
| 1. Ethmoidal Surface of Orbital Process. | 5, 6. Internal Surface. [Plate. |
| 2. Maxillary Surface of same. | 7. Upper Surface of Horizontal |
| 3. Spheno-palatine Notch. | 8. Internal Border of same. |
| 4. Sphenoidal Process. | 9. Tuberosity. [Portion. |
| | 10. External Surface of Vertical |

FIG. IV. SAME BONE—POSTERIOR BORDER.

- | | |
|---|-----------------------------------|
| 1. Sphenoidal Surface of Orbital Process. | 8. Internal Border of same. |
| 2. Orbital Surface of same. | 9. Articular Groove for Internal |
| 3. Zygomatic Surface of same. | Pterygoid Plate. |
| 4. Sphenoidal Process. | 10. Groove for Internal Pterygoid |
| 5. Spheno-palatine Notch. | Muscle. |
| 6. Internal Surface of Vertical Plate. | 11. Groove for External Pterygoid |
| 7. Superior Surface of Horizontal Plate. | Plate. |
| | 12. External Portion of Vertical |
| | Plate. |

FIG. V. SAME BONE—SUPERIOR ASPECT.

- | | |
|--|--------------------------------------|
| 1. Orbital Process. | 6. Its Posterior Border. |
| 2. Sphenoidal Process. | 7. Its Internal Border. |
| 3. Spheno-palatine Notch. | 8. Its Anterior Border. |
| 4. Posterior Border of Vertical Plate. | 9. Anterior Spine of Vertical Plate. |
| 5. Superior Surface of Horizontal Plate. | 10. Posterior Nasal Spine. |

FIG. VI. SAME BONE—INFERIOR ASPECT.

- | | |
|-----------------------------------|------------------------------|
| 1. Inferior Surface of Horizontal | 6. Sphenoidal Process. |
| 2. Its Posterior Border. [Plate. | 7. Posterior Palatine Canal. |
| 3. Its Anterior Border. | 8. Accessory Palatine Canal. |
| 4. Its Internal Border. | 9. Tuberosity. |
| 5. Orbital Process. | 10. Posterior Nasal Spine. |

FIG. VII. SAME BONE—MATURE FÆTUS—INTERNAL SURFACE.

- | | |
|-----------------------------|----------------------------------|
| 1. Sphenoidal Process. | 5. Anterior Border of Vertical |
| 2. Orbital Process. | Plate. |
| 3. Spheno-palatine Foramen. | 6. Internal Border of Horizontal |
| 4. Tuberosity. | Plate. |

FIG. VIII. LEFT INFERIOR TURBINATED BONE—INTERNAL SURFACE.

- | | |
|-------------------------------|--------------------------|
| 1. Superior Maxillary Border. | 5. Inferior Free Border. |
| 2. Lachrymal Process. | 6. Anterior Extremity. |
| 3. Ethmoidal Process. | 7. Posterior Extremity. |
| 4. Palatine Border. | |

FIG. IX. SAME BONE—OUTER SURFACE.

- | | |
|--|-------------------------|
| 1. Maxillary Border. | 5. Palatine Border. |
| 2. Lachrymal Process. | 6. Posterior Extremity. |
| 3. Ethmoidal Process. [Antrum. | 7. Anterior Extremity. |
| 4. Portion Covering the orifice of the | 8. Inferior Border. |

FIG. X. VOMER—RIGHT SIDE.

- | | |
|----------------------|------------------------|
| 1. Superior Border. | 4. Inferior Border. |
| 2. Posterior Border. | 5. Anterior Extremity. |
| 3. Anterior Border. | |

FIG. XI. VOMER—SUPERIOR AND ANTERIOR BORDERS.

- | | |
|--------------------------------|------------------------|
| 1. Groove and Alæ for Rostrum. | 3. Anterior Extremity. |
| 2. Groove of Anterior Border. | |

FIG. XII. RIGHT NASAL BONE—EXTERNAL SURFACE.

- | | |
|---------------------|---------------------|
| 1. Superior Border. | 3. External Border. |
| 2. Inferior Border. | 4. Internal Border. |

FIG. XIII. SAME BONE—INNER ASPECT.

- | | |
|---------------------|----------------------|
| 1. Superior Border. | 4. Internal Surface. |
| 2. Inferior Border. | 5. Internal Border. |
| 3. External Border. | |

FIG. XIV. FŒTAL VOMER.

- | | |
|---------------------|----------------------|
| 1. Anterior Border. | 3. Posterior Border. |
| 2. Inferior Border. | 4. Superior Border. |

FIG. XV. ETHMOID—SUPERIOR SURFACE.

- | | |
|------------------------------------|---|
| 1. Crista Galli. | 8. Os Planum. |
| 2. Cribriform Plate. | 9. Plate and Cells covered by Nasal Process of Upper Maxillary. |
| 3. Slit for Nasal Nerve. | |
| 4. Anterior Ethmoidal Foramen. | 10. Posterior part of Lateral Mass. |
| 5. Posterior Ethmoidal Foramen. | 11. Posterior Border of Cribriform Plate. |
| 6. Infundibulum. [Frontal. | |
| 7, 7. Part of Lateral Mass joining | 12. Perpendicular Plate. |

FIG. XVI. SAME BONE—INFERIOR SURFACE.

- | | |
|--|--------------------------------------|
| 1. Vertical Plate. | 3. Middle Turbinated Bone. |
| 2, 2. Grooves between Lateral Masses and Vertical Plate. | 4. Inferior Orifice of Infundibulum. |
| | 5. Maxillary Process. |

- | | |
|---|---|
| 6. Palate Process. | 8. Plates and Cells covered by Nasal Process. |
| 7. Posterior Portion of Lateral Masses. | 9. Posterior part of Middle Turbinal. |

FIG. XVII. SAME BONE—ANTERIOR SURFACE.

- | | |
|--|--|
| 1. Crista Galli. | 6. Plate and Cells joining the |
| 2. Eminences on the same. | 7. Os Planum. [Lachrymal. |
| 3. Vertical Plate. | 8. Inferior Border of Same. |
| 4. Groove between it and Lateral Masses. | 9. Plates joining the Middle Turbinal. |
| 5. Lateral Masses and Orifice of Infundibulum. | 10. Anterior Border of Lateral Masses. |

FIG. XVIII. SAME BONE—POSTERIOR SURFACE.

- | | |
|------------------------------------|--|
| 1. Crista Galli. | 6. Posterior Extremity of Superior Meatus. |
| 2. Its eminences. | 7. Posterior Extremity of Middle Turbinal. |
| 3. Vertical Plate. [Masses. | 8. Posterior Ethmoidal Cells. |
| 4. Groove between it and Lateral | |
| 5. Posterior part of Lateral Mass. | |

FIG. XIX. SAME BONE—LEFT SIDE VIEW.

- | | |
|---|--|
| 1. Crista Galli. | 9. Its Anterior Border. |
| 2. Its eminences. | 10. Infundibulum. |
| 3. Anterior Ethmoidal Cell. | 11. Anterior Ethmoidal Cells. |
| 4. Os Planum. | 12. Inferior Border of Vertical Plate. |
| 5. Superior Border of Os Planum. | 13. Its Posterior Border. |
| 6. Its Inferior Border. | 14. Middle Turbinated Bone. |
| 7. Portion of same Border joining Palate. | 15. Its Posterior Extremity. |
| 8. Posterior Border of Os Planum. | 16. Superior Meatus. |

FIG. XX. SAME BONE—LONGITUDINAL SECTION—LEFT SIDE VIEW.

- | | |
|---|---|
| 1. Crista Galli. | 7. Posterior Border. |
| 2. Its eminences. | 8. Slit for Nasal Nerve. |
| 3. Perpendicular Plate. | 9. Inferior Orifices of Olfactory Foramina. |
| 4. Its Anterior Border. | 10. Middle Turbinated Bone. |
| 5. Its Inferior Border joining Cartilage of Septum. | 11. Superior Meatus. [Mass. |
| 6. Articular Surface for Vomer. | 12. Posterior part of Left Lateral |

FIG. XXI. SAME BONE—LONGITUDINAL SECTION—RIGHT SIDE.

- | | |
|---|---|
| 1. 1. Bristles passed through Anterior Ethmoidal Cells and Middle Turbinal. | 2. 2. Bristles passed into Posterior Ethmoidal Cells through the Superior Meatus. |
|---|---|

- | | |
|--|-------------------------------------|
| 3. Posterior Ethmoidal Foramen. | 7. Superior Turbinated. |
| 4. Plate in front of Superior Turbinal. | 8. Superior Meatus. |
| 5. Anterior Ethmoidal Foramen. | 9. Middle Turbinated. |
| 6. Olfactory orifices of Cribriform Plate. | 10. Its Posterior Extremity. [Mass. |
| | 11. Posterior part of Right Lateral |
| | 12, 13. Plates of Anterior Cells. |

FIG. XXII. SAME BONE—LEFT SIDE—OS PLANUM REMOVED TO SHOW ANTERIOR AND POSTERIOR CELLS.

- | | |
|--|---|
| 1. Crista Galli. | 6. Anterior extremity of Middle Turbinal. |
| 2. Its eminences. | 7. Inferior Border of same. |
| 3, 3, 3. Anterior Ethmoidal Cells. | 8. Superior Meatus. |
| 4, 4, 4. Posterior Ethmoidal Cells. | 9. Plate of Anterior Cells. |
| 5. Septum separating Anterior and Posterior Cells. | 10. Plate of Posterior Cells. |

FIG. XXIII. FŒTAL INFERIOR TURBINATED BONE—ANTERIOR ASPECT.

- | | | |
|---|------------|---|
| 1. Process projecting from Superior Border. | [Surface. | 3. Process projecting downwards from Superior Border. |
| 2. Anterior Extremity and Internal | | 4. Concave External Surface. |

PLATE IX. FIGS. I TO V.

FIG. I. FRONTAL BONE—OUTER SURFACE.

- | | |
|-------------------------------|------------------------------------|
| 1. Remains of Frontal Suture. | 7. Orbital Arch. |
| 2. Nasal Eminence. | 8. Supra-orbital Notch or Foramen. |
| 3. Nasal Notch. | 9. Internal Angular Process. |
| 4. Nasal Spine. | 10. External Angular Process. |
| 5. Frontal Eminence. | 11. Temporal Ridge. |
| 6. Superciliary Ridge. | 12. Superior Border. |

FIG. II. FRONTAL BONE—INNER SURFACE.

- | | | |
|--|------------|---|
| 1. Groove for superior longitudinal Sinus. | [Ethmoid. | 8. Expanded base of the Nasal Spine. |
| 2. Frontal crest, for articulation with | | 9. External Angular Process. |
| 3. Foramen Cæcum. | | 10. Orbital Arch. |
| 4. Nasal Spine. | | 11. Surface articulating with the Great Wing of the Sphenoid. |
| 5. Openings of Frontal Sinuses. | | 12. Inferior Border. |
| 6. Anterior Fossa of Skull. | | 13. Superior Border. |
| 7. Cerebral Surface of the Orbital Plates. | | |

FIG. III. FRONTAL BONE—HORIZONTAL PORTION—EXTERNAL SURFACE.

- | | |
|---------------------------------|--|
| 1. Median line. | 4. Superior Border seen through Ethmoidal Notch. |
| 2. Frontal Eminence. | |
| 3. Openings of Frontal Sinuses. | 5. Frontal Eminence. |

- | | |
|--------------------------------|---|
| 6. Superciliary Ridge. | 12. Inferior Border divided by the Ethmoidal Notch. |
| 7. Orbital Arch. | 13. Surface articulating with Great Wing of Sphenoid. |
| 8. Superior part of the Orbit. | 14. Ethmoidal Cells. |
| 9. Orbital Plate. | 15. Lachrymal Fossa. |
| 10. Internal Angular Process. | 16. Ethmoidal Notch. |
| 11. External Angular Process. | |

FIG. IV. FRONTAL BONE—ANTERIOR SURFACE. ANTERIOR TABLE REMOVED TO SHOW THE CAVITIES, SEPTUM, AND INFERIOR OPENINGS OF THE FRONTAL SINUSES.

- | | |
|---|--|
| 1. Median Line of the bone. | 4. Nasal Notch. |
| 2. Frontal Sinuses, their openings communicating with the Nasal Fossæ, and their prolongations backward to the level of the orbital region. | 5. Nasal Spine. |
| 3. Septum. | 6. Internal Angular Process. |
| | 7. External Angular Process. |
| | 8. Orbital arch and Supra-orbital Foramen. |
| | 9. Temporal Ridge. |

FIG. V. FRONTAL BONES AT BIRTH—DEVELOPED BY TWO LATERAL HALVES—NATURAL SIZE.

PLATE X. FIGS. I TO VI.

FIG. I. RIGHT PARIETAL BONE—EXTERNAL SURFACE—NATURAL SIZE.

- | | |
|---------------------------------|-----------------------------------|
| 1. Parietal Eminence. | 7. Posterior or Occipital Border. |
| 2. Temporal Ridge. | 8. Anterior Superior Angle. |
| 3. Parietal Foramen. | 9. Anterior Inferior Angle. |
| 4. Superior or Parietal Border. | 10. Posterior Inferior Angle. |
| 5. Inferior or Temporal Border. | 11. Posterior Superior Angle. |
| 6. Anterior or Frontal Border. | |

FIG. II. PARIETAL BONE—INTERNAL OR CEREBRAL SURFACE.

- | | |
|-------------------------------------|-------------------------------|
| 1. Parietal Fossa. [tery. | 8. Inferior Border. |
| 2. Groove for Middle Meningeal Ar- | 9. Anterior Border. |
| 3. Grooves for its branches. | 10. Posterior Border. |
| 4. Parietal Foramen. [Sinus. | 11. Anterior Superior Angle. |
| 5. Groove for Superior Longitudinal | 12. Anterior Inferior Angle. |
| 6. Groove for Lateral Sinus. | 13. Posterior Superior Angle. |
| 7. Superior Border. | 14. Posterior Inferior Angle. |

FIG. III. OCCIPITAL BONE—OUTER SURFACE—NATURAL SIZE.

- | | |
|---|------------------------------------|
| 1. Smooth Surface for Occipito-Frontalis. | 3. External Occipital Crest. |
| 2. External Occipital Protuberance. | 4. Foramen Magnum. |
| | 5. Basilar Process—Inferior Angle. |

- | | |
|---|----------------------|
| 6. Superior Curved Line. | (not constant.) |
| 7. Rough surface for Muscular Attachment. | 12, 12. Condyles. |
| 8. Inferior Curved Line. | 13. Superior Border. |
| 9. Same as No. 7. | 14. Lateral Angle. |
| 10. Posterior Condylloid Fossa. | 15. Inferior Border. |
| 11. Posterior Condylloid Foramen— | 16. Jugular Process. |
| | 17. Superior Angle. |

FIG. IV. OCCIPITAL BONE—INTERNAL SURFACE.

- | | |
|--|--|
| 1. Groove for Superior Longitudinal Sinus. | 10. Groove for Lateral Sinus. |
| 2. Internal Occipital Protuberance. | 11. Jugular Process. |
| 3. Internal Occipital Crest. | 12. Groove for Petrosal Sinus. |
| 4. Foramen Magnum. | 13. Fossa and Anterior Condylloid Foramen. |
| 5. Basilar Process; anterior surface articulating with body of Sphenoid. | 14. Condyle. |
| 6. Superior Occipital Fossa, for Cerebrum. [side. | 15. Posterior Condylloid Foramen. |
| 7. Groove for Lateral Sinus of left | 16. Superior Border. |
| 8. Groove for Lateral Sinus of right side. [bellum. | 17. Inferior Border. |
| 9. Inferior Occipital Fossa, for Cere- | 18. Superior Angle. |
| | 19. Lateral Angle. |
| | 20. Borders of the Basilar process articulating with petrous portion of Temporal Bone. |

FIGS. V AND VI. FÆTAL PARIETAL AND OCCIPITAL.

PLATE XI.

FIGS. I TO VII. SPHENOID BONE.

FIG. I. SPHENOID—SUPERIOR SURFACE.

- | | |
|--|--|
| 1. Grooves for Olfactory Nerves. | 14. Cavernous Groove. |
| 2. Optic Groove. | 15. Foramen Rotundum. |
| 3, 3. Optic Foramen. | 16. Foramen Ovale. |
| 4. Superior Surface of Lesser Wing. | 17. Foramen Spinosum. |
| 5. Apex of same. | 18. Posterior surface of body for Occipital. |
| 6. Anterior Clinoid Process. | 19. Posterior surface of body for Petrous. |
| 7. Border of Ala Minor. | 20. Spine of Sphenoid. |
| 8. Petuitary Fossa. | 21. Posterior Border of Alæ Majores. |
| 9. Support of Posterior Clinoid Process. | 22. Triangular surface joining the Frontal. |
| 10. Posterior Clinoid Process. | 23. Articular surface for Parietal. |
| 11. Basilar Groove. | 24. Ethmoidal Spine. |
| 12. Sphenoidal Fissure. | |
| 13. Superior Surface of Ala Major. | |

FIG. II. SAME BONE—INFERIOR SURFACE.

- | | |
|--|---|
| 1, 2. Rostrum. | 14. Border of Spheno-maxillary Fissure. |
| 3. Sphenoidal Sinuses. | 15. Articular Border for Malar Bone. |
| 4. Ethmoidal Spine. | 16. Temporal Surface of Great Wing. |
| 5. Sphenoidal Turbinated Bone. | 17. Zygomatic Surface of Great Wing. |
| 6. Base of Pterygoid Process. | 18. Foramen Ovale. |
| 7. Internal Pterygoid Plate. | 19. Foramen Spinosum. |
| 8. External Pterygoid Plate. | 20. Posterior Border of Great Wing. |
| 9. Posterior Surface of Body. | 21. Tip of Ala Major. |
| 10. Inferior Surface of Lesser Wing. | 22. Sphenoidal Spine. |
| 11. Sphenoidal Fissure. | 23. Foramen Rotundum. |
| 12. Articular Surface of Lesser Wings for Frontal. | |
| 13. Orbital Surface of Great Wing. | |

FIG. III. SAME BONE—ANTERIOR SURFACE.

- | | |
|---|---|
| 1. Support for Posterior Clinoid Process. | 12. Articular Surface for Malar Bone. |
| 2. Olfactory Groove. | 13. Margin of Sphenoidal Fissure. |
| 3, 4. Rostrum. | 14. Sphenoidal Zygomatic Surface. |
| 5, 5. Sphenoidal Sinuses. | 15. Sphenoid portion of Temporal Fossa. |
| 6. Articular Border for Ethmoid. | 16. Articular Border for Frontal. |
| 7. Anterior Border of Lesser Wing. | 17. Apex of Great Wing. |
| 8. Inferior Surface of same. | 18. Foramen Spinosum and Spine. |
| 9. Sphenoidal Fissure. | 19. Foramen Ovale. |
| 10. Foramen Rotundum. | 20. External Pterygoid Plate. |
| 11. Orbital Surface of Great Wing. | 21. Internal Pterygoid Plate. |
| | 22. Vidian Canal. |

FIG. IV. SAME BONE—POSTERIOR SURFACE.

- | | |
|---|--------------------------------------|
| 1. Support for Posterior Clinoid Process. | 9. Anterior Clinoid Process. |
| 2. Posterior Clinoid Process. | 10. Posterior Border of Lesser Wing. |
| 3. Basilar Groove. [ital.] | 11. Internal Pterygoid Plate. |
| 4. Posterior Surface—joins Occip- | 12. External Pterygoid Plate. |
| 5. Pterygo-palatine Fissure. | 13. Pterygoid Fossa. |
| 6. Rostrum. | 14. Extremity of Great Wing. |
| 7. Vidian Canal. [Bone.] | 15. Anterior Border of Great Wing. |
| 8. Posterior Border joining Petrous | 16. Posterior Border of same. |
| | 17. Articular Surface for Malar. |

FIG. V. SAME BONE—SUPERIOR SURFACE. THE UPPER PLATE REMOVED, EXPOSING THE SPHENOIDAL SINUSES AND THEIR SEPTUM.

- | | |
|---|--------------------------------------|
| 1. Superior Surface. | 5. Posterior Clinoid Process. |
| 2. Sphenoidal Sinuses. | 6. Anterior Clinoid Process. |
| 3. Orifices of same. | 7. Optic Foramen. |
| 4. Support for Posterior Clinoid Process. | 8. Superior Surface of Lesser Wings. |

- | | |
|--|--|
| 9. Sphenoidal Fissure. | 16. Foramen Rotundum. |
| 10. Anterior Border of Alæ Minores. | 17. Foramen Ovale. |
| 11. Articular Border of Ala Major for Frontal. | 18. Foramen Spinosum. |
| 12. Extremity of Great Wing. | 19. Sphenoidal Spine. |
| 13. Posterior Border of Great Wing. | 20. Posterior Surface of Body. |
| 14. Superior Surface of Great Wing. | 21. Posterior Surface of Support of Posterior Clinoid Processes. |
| 15. Cavernous Groove. | |

FIG. VI. SAME BONE—MATURE FÆTUS—UPPER ASPECT.

- | | |
|-------------------------------|-------------------------|
| 1. Posterior Portion of Body. | 3. Great Wings. |
| 2. Lesser Wings. | 4. Root of Great Wings. |

FIG. VII. SAME BONE—POSTERIOR SURFACE.

- | | |
|-------------------------------|------------------|
| 1. Posterior Surface of Body. | 4. Lesser Wings. |
| 2. Inferior Surface of Body. | 5. Great Wings. |
| 3. Pterygoid Processes. | |

FIG. VIII. SAME BONE—INFERIOR SURFACE.

- | | |
|--|------------------------|
| 1. Anterior Portion of Body. | 5. Sphenoidal Fissure. |
| 2. Lesser Wings. | 6. Great Wings. |
| 3. Posterior Portion of Body. | 7. Pterygoid Process. |
| 4. Cavity found on the Inferior surface of the Fœtal Sphenoid. | 8. Root of Great Wing. |

PLATE XII. FIGS. I TO XIII.

FIG. I. TEMPORAL BONE—EXTERNAL SURFACE.

- | | |
|--|---|
| 1. Squamous Portion. | 13. Superior Orifice of Carotid |
| 2. Zygomatic Porcess. | 14. Base of Styloid Process. [Canal. |
| 3. Articular Surface for Malar. | 15. Styloid Process. |
| 4. Base of Zygomatic Process. | 16. Mastoid Process. |
| 5. Anterior Root. | 17. Mastoid Groove. |
| 6. Middle Root. | 18. Mastoid Foramen. |
| 7. Posterior Root. | 19. Superior Border. |
| 8. Posterior Margin of Glenoid Fossa. | 20. Surface for Articulation with Great Wing of Sphenoid. |
| 9. Auditory Process. | 21. Notch between Petrous and Squamous Portions. |
| 10. Anterior Portion of Glenoid Fossa. | 22. Groove between Squamous and Mastoid Portions. |
| 11. Posterior Portion of same. | 23. Inferior Border. |
| 12. Petrous Portion of Temporal. | |

FIG. II. TEMPORAL BONE—INTERNAL SURFACE.

- | | |
|-------------------------------------|--|
| 1. Squamous Portion, Inner Surface. | 2. Groove for lodgment of Branch of Middle Meningeal Artery. |
|-------------------------------------|--|

- | | |
|---|--|
| 3. Superior Surface of Petrous Portion. | 13. Groove for Lateral Sinus. |
| 4. <i>Hiatus Fallopii</i> . [tion. | 14. Internal Orifice of Mastoid Foramen. |
| 5. Posterior Surface of Petrous Portion. | 15. Superior Border of Bone. |
| 6. Orifice of <i>Acqueductus Vestibuli</i> . | 16. Surface articulating with the Great Wing of Sphenoid. |
| 7. Meatus Auditorius Internus. | 17. Articular Surface of Zygomatic Process for the Malar Bone. |
| 8. Superior Border of Petrous Portion. | 18. Groove between Squamous and Petrous Portions. |
| 9. Apex of Petrous Portion. | 19. Groove between the Squamous and Mastoid Portions. |
| 10. Surface articulating with Jugular Process of Occipital. | 20. Articular Surface for Occipital. |
| 11. Inferior Border of Petrous Portion. | |
| 12. Styloid Process. [tion. | |

FIG. III. TEMPORAL BONE—INFERIOR SURFACE.

- | | |
|--|--|
| 1. Zygomatic Process. [Bone. | 13. Groove for Lateral Sinus. |
| 2. Articular Surface for Malar Bone. | 14. Vaginal Process. |
| 3. Base of Zygomatic Process. | 15. Meatus Auditorius Externus. |
| 4. Anterior Root. | 16. Stylo-mastoid Foramen. |
| 5. Superior division of Middle Root. | 17. Apex of Mastoid Process. |
| 6. Inferior division of Middle Root. | 18. Groove for Digastric Muscle. |
| 7. Anterior Portion of Glenoid Cavity. | 19. Mastoid Foramen. |
| 8. Posterior Portion of Glenoid Cavity. | 20. <i>Acqueductus Cochleæ</i> , Orifice of. |
| 9. Glaserian Fissure. | 21. Superior Orifice of Carotid Canal. |
| 10. Inferior Orifice of Carotid Canal. | 22. Angle between Squamous and Petrous Portions. |
| 11. Jugular Fossa. | 23. Anterior Border of Squamous Portion. |
| 12. Triangular Surface for articulating with the Jugular Portion of Occipital. | 24. External Surface of Squamous Portion. |

FIG. IV. TEMPORAL BONE OF A MATURE FŒTUS—EXTERNAL SURFACE.

- | | |
|---|---|
| 1. Squamous Portion. | 7. Articular Surface for Malar Bone. |
| 2. Zygomatic Process. | 8. Bony Ring at Meatus Auditorius Externus. |
| 3. Superior Division of Middle Root. | 9. Stylo-mastoid Foramen. |
| 4. Inferior Division of Middle Root. | 10. Mastoid Portion. [tion. |
| 5. Glenoid Cavity (very shallow). | 11. Inferior Border of Mastoid Portion. |
| 6. Angle between the Squamous and Petrous Portions. | 12. Rudiments of Mastoid Process. |

FIG. V. RIGHT SUPERIOR MAXILLARY BONE—EXTERNAL SURFACE.

- | | |
|---|---|
| 1. Apex of Nasal Process articulating with Frontal. | 2. Anterior Border of Nasal Process articulating with Nasal Bone. |
|---|---|

- | | |
|--|--|
| 3. Inner Margin of Posterior Border articulating with Os Unguis. | 9. Posterior Portion of same Border joining the Palate Bone. |
| 4. External Margin of Posterior Border. | 10. Malar Process. |
| 5. Orbital Surface. | 11. Infra-orbital Foramen. |
| 6. Infra-orbital Groove. | 12. Incisive Fossa. |
| 7. Anterior Portion of Border of Orbital Surface articulating with Lachrymal Bone. | 13. Ridge extending from Malar Process to the Alveolar Border. |
| 8. Middle Portion of same joining the Ethmoid. | 14. Maxillary Tuberosity. |
| | 15. Nasal Border. |
| | 16. Anterior Nasal Spine. |
| | 17. Alveolar Border. |

FIG. VI. SAME BONE—INTERNAL SURFACE.

- | | |
|--|---|
| 1. Apex of Nasal Process. | 12. Inferior Meatus. |
| 2. Anterior Border of same. [der. | 13. Antrum of Highmore. |
| 3. Internal Margin of Posterior Border. | 14. Portion of Antrum closed by Palate Bone. |
| 4. Superior Turbinated Crest. | 15. Surface joining the Vertical Portion of Palate. |
| 5. Middle Meatus. | 16. Posterior Palatine Canal. |
| 6. Inferior Turbinated Crest. | 17. Articular Surface for the Tuberosity of Palate. |
| 7. Nasal Notch. | 18. Alveolar Process. |
| 8. Nasal Spine. | 19. Maxillary Tuberosity. |
| 9. Palate Process. | |
| 10. Anterior Palatine Canal. | |
| 11. Hard Palate forming the Floor of the Nose. | |

FIG. VII. SAME BONE—SUPERIOR SURFACE.

- | | |
|--|---|
| 1. Apex of Nasal Process. | 9. Border of Spheno-maxillary Fissure. |
| 2. Its Anterior Border. | 10. Malar Process. [sure. |
| 3. Anterior Nasal Spine. | 11. Two Margins of Posterior Border of Nasal Process. |
| 4, 5. Alveolar Border. | 12. Superior Surface of Palate Process. [Border. |
| 6. Orbital Surface. [face. | 13. Articular Surface for Palate |
| 7. Internal Border of Orbital Surface. | |
| 8. Infra-orbital Groove. | |

FIG. VIII. SAME BONE—INFERIOR SURFACE.

- | | |
|--|--|
| 1. Nasal Process. | 9. Posterior of same. |
| 2. Nasal Notch. | 10. Socket of Middle Incisor Tooth. |
| 3. Nasal Spine. | 11. Socket of Lateral Incisor. |
| 4. Canine Fossa and Infra-orbital Foramen. | 12. Socket of Canine Tooth. |
| 5. Malar Process. | 13, 14. Sockets for two Bicuspids. |
| 6. Palate Process. | 15, 16, 17. Multilocular Sockets of three Molars. |
| 7. Anterior Palatine Foramen. | 18. Internal Surface articulates with the Palate Bone. |
| 8. Internal Border of Palate Process. | |

FIG. IX. SAME BONE—THE MAXILLARY SINUS, INFRA-ORBITAL CANAL, AND ALVEOLI LAID OPEN.

- | | |
|--|--|
| 1. Apex of Nasal Process. | 11, 11, 11. Divided Portion of the Bone. |
| 2. Anterior Border of same. | 12. Internal Orifice of the Antrum. |
| 3. Internal Margin of Posterior Border. | 13, 13. Internal Wall and Bony Lamina of same. |
| 4. External Margin of same. | 14. Anterior Wall of Antrum. |
| 5. Orbital Surface. | 15. Nasal Notch. |
| 6. Internal Border of same. | 16. Anterior Nasal Spine. |
| 7. Infra-orbital Groove and Canal. | 17, 18. Sockets of the two Incisors. |
| 8. Bifurcation of Infra-orbital Canal. | 19. Socket for the Canine. |
| 9. Inferior Division of same, giving passage to the Dental Nerves. | 20, 21. Sockets for the two Bicuspids. |
| 10, 10. Superior Division of same Canal. | 22, 23, 24. Sockets for the three Molars. |

FIG. X. FETAL MAXILLARY—EXTERNALLY.

- | | |
|--------------------------|--|
| 1. Nasal Process. | 5. Infra-orbital Foramen. |
| 2. Nasal Notch. | 6. Orbital Surface and Infra-orbital Groove. |
| 3. Anterior Nasal Spine. | 7. Malar Process. |
| 4. Inferior Border. | |

FIG. XI. SUPERIOR MAXILLA OF A WOMAN OF NINETY—INFERIOR SURFACE, SHOWING THE COMPLETE OBLITERATION OF THE ALVEOLAR PROCESS.

- | | |
|---|---|
| 1. Nasal Process. | 7. Malar Process. |
| 2. Nasal Notch. | 8. Palate Process. |
| 3. Anterior Nasal Spine. | 9. Its Internal Border. |
| 4. Infra-orbital Foramen. | 10. Anterior Palatine Foramen. |
| 5. Inferior Border. | 11. Posterior Border of Palate Process. |
| 6. Concave Surface from Malar Process to Alveolar Border. | 12. Maxillary Tuberosity. |

FIG. XII. RIGHT MALAR BONE—EXTERNAL SURFACE.

- | | |
|---|-------------------------------|
| 1. Frontal Process. [cess. | 6. Posterior Superior Border. |
| 2. Inferior Angle of Maxillary Process. | 7. Posterior Inferior Border. |
| 3. Anterior Angle of same Process. | 8. Anterior Inferior Border. |
| 4. Zygomatic Process. | 9. External Surface. |
| 5. Anterior Superior Border. | 10. Malar Foramen. |

FIG. XIII. SAME BONE—INTERNAL SURFACE.

- | | |
|---|-------------------------------|
| 1. Frontal Process. [lar Canal. | 7. Anterior Superior Border. |
| 2. Orbital Process and Temporo-malar Canal. | 8. Anterior Inferior Border. |
| 3, 4. Free Border of Internal Surface. | 9. Posterior Inferior Border. |
| 5. Articular Surface for Upper Maxillary. | 10. Anterior Angle. |
| 6. Posterior Superior Border. | 11. Posterior Angle. |
| | 12. Inferior Angle. |

PLATE XIII. FIGS. I TO X.

FIG. I. BASE OF THE SKULL—EXTERNAL SURFACE.

- | | |
|---------------------------------------|--------------------------------------|
| I. Sphenoid. | 38. Superior Curved Line. |
| II. Occipital. | 39. External Occipital Crest. |
| III. Temporal. | 40. Inferior Curved Line. |
| IV. Parietal, (posterior inferior an- | 44. Squamous Portion of Temporal. |
| VII. Vomer. [gle.) | 45. Zygomatic Process of Temporal. |
| IX. Malar. | 46. Its Anterior Root. |
| X. Superior Maxillary. | 47. Its Posterior Root. |
| XI. Palate. | 48. Eminentia Articularis. |
| XII. Nasal. | 49. Glenoid Cavity. |
| 13. Great Wing of Sphenoid. | 50. Glaserian Fissure. |
| 15. Speno-maxillary Fissure. | 51. Mastoid Portion of Temporal. |
| 16. Spine of Sphenoid. | 62. Mastoid Process. |
| 17. Alæ Ingrassiæ. | 53. Occipital Groove. |
| 18. Foramen Ovale. | 55. Mastoid Foramen. |
| 19. Foramen Spinosum. | 57. Meatus Auditorius Externus. |
| 20, 21. External Pterygoid Plates. | 59. Vaginal Process. |
| 22. Internal Pterygoid Plate. | 60. Stylo-mastoid Foramen. |
| 24. Vaginal Process. | 61. Carotid Canal. |
| 25. Hamular Process. | 66. Foramen Lacerum Medium. |
| 26. Basilar Process of Occipital. | 68. Superciliary Ridge of Frontal. |
| 27. Spina Basilaris. | 71. External Angular Process of |
| 31. Condyle. | 80. Alveolar Process. [Frontal. |
| 32. Posterior Condylloid Fossa. | 81. Palate Process of Superior Max- |
| 33. Jugular Fossa. | illary. |
| 36. Smooth Surface for Occipito- | 83. Anterior Palatine Fossa. |
| Frontalis. | 85. Horizontal Plate of Palate Bone. |
| 37. External Occipital Protuberance | 86. Posterior Palatine Foramen. |

FIG. II. BASE OF THE SKULL—CEREBRAL SURFACE.

- | | |
|-------------------------------------|----------------------------------|
| 1. Frontal Bone. | 13. Basilar Suture and Process. |
| 2. Foramen Cæcum. | 14. Foramen Magnum. |
| 3. Crista Galli. | 15. Anterior Condylloid Foramen. |
| 4. Cribriform Plate of Ethmoid. | 16. Groove for Occipital Sinus. |
| 5. Ethmoidal Spine of Sphenoid. | 17. Torcular Herophili. |
| 6. Body of Sphenoid. | 18. Orbital Plate of Frontal. |
| 7. Optic Groove. | 19. Lesser Wing of Sphenoid. |
| 8. Optic Foramen. | 20. Coronal Suture. |
| 9. Sella Turcica. | 21. Parietal Bone. |
| 10. Anterior Clinoid Process. | 22. Squamo-parietal Suture. |
| 11. Support for the Posterior Clin- | 23. Squamo-sphenoidal Suture. |
| oid Processes. | 24. Sphenoidal Fissure. |
| 12. Posterior Clinoid Process. | 25. Foramen Rotundum. |

- | | |
|---------------------------------|--|
| 26. Foramen Ovale. | 36. Posterior-inferior Angle of Parietal. |
| 27. Cavernous Groove. | 37. Mastoid Foramen. |
| 28. Foramen Lacerum Medium. | 38. Masto-occipital Suture. |
| 29. Foramen Spinosum. | 39. Posterior inferior Fossa—for Cerebellum. |
| 30. Hiatus Fallopii. | 40. Groove for Lateral Sinus. |
| 31. Slit for Dura-mater. | 41. Coronal Suture. |
| 32. Meatus Auditorius Internus. | 42. Lambdoid Suture. [ance. |
| 33. Groove for Petrosal Sinus. | 43. External Occipital Protuber- |
| 34. Foramen Lacerum Posterius. | |
| 35. Posterior Condylod Foramen. | |

FIG. III. VERTICAL SECTION OF SKULL—INTERNAL SURFACE.

- | | |
|--|---|
| I. Sphenoid. | 29. Condylod Portion of Occipital. |
| II. Occipital. | 31. Condyle. |
| IV. Parietal. | 36. Pars Occipitalis. [ance. |
| V. Frontal. | 37. External Occipital Protuber- |
| VI. Ethmoid. | 44. Squamous Portion of Temporal. |
| VIII. Inferior Turbinated. | 56. Petrous Portion of Temporal. |
| X. Superior Maxillary. | 63. Meatus Auditorius Internus. |
| XI. Palate. | 67. Frontal Bone. |
| XII. Nasal. | 69. Internal Frontal Bone. |
| 1. Body of Sphenoid—Posterior | 72. Nasal Eminence. |
| 2. Petuitary Fossa. [Surface | 73. Foramen Cœcum. |
| 3. Posterior Clinoid Process. | 74. Frontal Sinus. |
| 4. Groove for Pons Varoli. (Civus Blumenbachii.) | 75. Crista Galli. |
| 6. Olivary Process. | 76. Cribiform Plate. |
| 7. Carotid or Cavernous Groove. | 77. Superior Turbinated Bone. |
| 11. Anterior Clinoid Process. | 78. Middle Turbinated Bone. |
| 20. External Pterygoid Plate. | 79. Nasal Process of Superior Max- |
| 23. Pterygoid Fossa. | 80. Alveolar Process. [illary. |
| 25. Hamular Process. | 82. Crest of Superior Maxillary. |
| 26. Basilar Process. | 84. Perpendicular Portion of Palate Bone. |

FIG. IV. INFERIOR MAXILLARY BONE—INTERNAL SURFACE.

- | | |
|-----------------------------|----------------------|
| 1. Body. | 6. Sigmoid Notch. |
| 2. Mylo-Hyoidean Line. | 7. Coronoid Process. |
| 3. Alveolar Process. | 8. Condylod Process. |
| 4. Ramus. | 9. Condyle. |
| 5. Inferior Dental Foramen. | 10. Neck. |
| | 11. Angle of Jaw. |

FIGS. V, VI, ATLAS—FIG. V, SUPERIOR SURFACE. FIG. VI, INFERIOR SURFACE.

- | | |
|------------------------------------|-----------------------------------|
| 1. Anterior Arch. | 6. Lateral Masses. |
| 2. Tubercle. | 7. Superior Articular Surface. |
| 3. Articular Surface for Odontoid. | 8. Inferior Articular Surface. |
| 4. Posterior Arch. [Process.) | 9. Tubercles for Transverse Liga- |
| 5. Tubercle. (Rudimentary Spinous | 11. Transverse Processes. [ment. |

- Fig. VII. Axis—Superior Surface.
 Fig. VIII. Third Cervical Vertebra—Superior Surface.
 Fig. IX. Dorsal Vertebra—Side View.

FIG. X. LUMBAR VERTEBRA—SIDE VIEW.

- | | |
|----------------------------------|----------------------------------|
| 1. Odontoid Process of Axis. | 6. Superior Articular Processes. |
| 2. Body of Vertebra. | 7. Transverse Process. |
| 3. Arch formed by Laminæ. | 8. Its Anterior Root. |
| 4. Spinous Process. | 9. Its Posterior Root. |
| 5. Inferior Articular Processes. | 10. Demi-facet for Head of Rib. |

PLATE XIV. FIGS. I TO IX.

FIG. I. SEVENTH CERVICAL VERTEBRA—SUPERIOR SURFACE.

- | | |
|-----------------------|--------------------------------|
| 1. Body. | 3. Superior Articular Process. |
| 2. Vertebral Foramen. | 4. Spinous Process. |

FIG. II. EIGHTH DORSAL VERTEBRA—INFERIOR SURFACE.

- | | |
|--|--------------------------|
| 1. Body. | 4. Spinous Process. |
| 2. Inferior Articular Process looking forward. | 5. Spinal Foramen. |
| 3, 3. Transverse Processes. | 6. Intervertebral Notch. |

FIG. III. SAME VERTEBRA—SUPERIOR SURFACE.

- 1, 2, 3, 4, 5. Same as in the above. Superior Articular Process facing backward.

FIG. IV. FOURTH LUMBAR VERTEBRA—INFERIOR SURFACE.

- | | |
|---|--------------------------------|
| 1. Body. | ing forward and outward. |
| 2. Transverse Process. | 4. Superior Articular Process. |
| 3. Inferior Articular Process, looking forward. | 5. Spinous Process. |

FIG. V. SAME VERTEBRA—UPPER ASPECT.

- | | |
|--------------------------------|--------------------------------|
| 1. Body. | 4. Inferior Articular Process. |
| 2. Transverse Process. | 5. Spinous Process. |
| 3. Superior Articular Process. | |

FIG. VI. SACRUM—ANTERIOR VIEW.

FIG. VII. SACRUM—POSTERIOR VIEW.

- | | |
|--|-----------------------------------|
| 1. Body of Sacral Vertebrae. | 4. Rudimentary Spinous Processes. |
| 2. Anterior Sacral Foramina. | 5. Posterior Sacral Foramina. |
| 3. Rudimentary Coalesced Transverse Processes. | 6. Sacral Cornua. |

FIG. VIII. COCCYX.

1. Rudiments of Transverse Processes.

2. Cornua.

FIG. IX. POSTERIOR ASPECT OF RIBS.

1. Posterior Extremity.
2. Head.
3. Tubercle.
4. Neck.

5. Angle.
6. Shaft.
7. Sternal Extremity.

PLATE XV. FIGS. I TO VI.

FIG. I. HUMERUS—POSTERIOR ASPECT.

- | | |
|---------------------------|----------------------|
| 1. Head. | 6. Internal Surface. |
| 2. Neck. | 7. External Surface. |
| 3. Greater Tuberosity. | 8. Inner Condyle. |
| 4. Musculo-spiral Groove. | 9. Trochlea. |
| 5. Posterior Surface. | |

FIG. II. SAME BONE—ANTERIOR VIEW.

- | | |
|--------------------------|---------------------|
| 1. Head. | 8. Outer Surface. |
| 2. Neck. | 9. Inner Surface. |
| 3. Greater Tuberosity. | 10. Coronoid Fossa. |
| 4. Lesser Tuberosity. | 11. Inner Condyle. |
| 5. Bicipital Groove. | 12. Outer Condyle. |
| 6. Insertion of Deltoid. | 13, 14. Trochlea. |
| 7. Anterior Surface. | 15. Capitellum. |

FIG. III. ULNA—INNER ASPECT.

- | | |
|-----------------------|--|
| 1. Olecranon Process. | 6. Interosseous Border. |
| 2. Coronoid Process. | 7. Surface joining Radius. |
| 3. Sigmoid Cavity. | 8. Surface joining Fibro-cartilage of Wrist. |
| 4. Inner Surface. | 9. Styloid Process. |
| 5. Inner Border. | |

FIG. IV. ULNA—SUPERIOR SURFACE.

- | | | |
|------------------------------------|---------|--|
| 1. Olecranon. | [face. | 7. Superior Surface. |
| 2. Internal Lateral Ligament, Sur- | | 8. Internal Border. |
| 3. Greater Sigmoid Cavity. | | 9. Surface for Fibro-cartilage of Wrist. |
| 4. Lesser Sigmoid Cavity. | | 10. Styloid Process. |
| 5. Origin of Flexor Profundus. | | 11. Surface joining Radius. |
| 6. Interosseous Border. | | |

FIG. V. RADIUS—UPPER ASPECT.

- | | |
|------------------------------|----------------|
| 1. Surface joining Humerous. | 3. Neck. |
| 2. Side of Head. | 4. Tuberosity. |

- | | |
|------------------------------------|------------------------------------|
| 5. Upper Border. | 9. Styloid Process. |
| 6. Outer Surface. | 10. Facets for Carpo-radial Joint. |
| 7. Interosseous Border. | 11. Facet for Radio-ulnar Joint. |
| 8. Groove for Extensores Pollicis. | |

FIG. VI. RADIUS—INFERIOR ASPECT.

- | | |
|----------------------------------|---|
| 1. Humeral Articular Surface. | 11. Groove for Extensor Minimi
Digiti. |
| 2. Head. | 12. Groove for Extensor Communis
and Indicis. |
| 3. Neck. | 13. Groove for Extensor Secundi—
Internodii Pollicis. |
| 4. Tubercle. | 14. Groove for Carpi-radialis Long
and Short Extensors. |
| 5. Posterior Surface. | 15. Groove for Extensores Ossis
Metacarp Pollicis and Primi
Internod. Pollicis. |
| 6. External Surface. | |
| 7. Inner Border. | |
| 8. Facets for Wrist Joint. | |
| 9. Styloid Process. | |
| 10. Facet for Radio-ulnar Joint. | |

PLATE XVI. FIGS. I TO VI.

FIG. I. OS INNOMINATUM—EXTERNAL SURFACE.

FIG. II. SAME—INTERNAL SURFACE.

- | | |
|-------------------------------------|-----------------------------------|
| 1. Ilium. | 16. Great Sacro-sciatic Notch. |
| 2. Middle Curved Line. | 17. Ischium. |
| 3. Ilio-pectineal Line. | 18. Its Ascending Ramus or Body. |
| 4. Inferior Curved Line. | 19. Descending Ramus. |
| 5. Auricular Surface. | 20. Spine of Ischium. |
| 6. Crest of the Ilium. | 21. Lesser Sacro-sciatic Notch. |
| 7. External Lip of Crest. | 22. Tuberosity of Ischium. |
| 8. Internal Lip. | 23. Obturator Foramen. |
| 9. Intermediate Space. [cess. | 24. Pubes. |
| 10. Anterior Superior Spinous Pro- | 25. Horizontal Ramus. |
| 11. Posterior Superior Spinous Pro- | 26. Descending Ramus. |
| cess. | 27. Crest of Pubes. |
| 12. Anterior Margin. [cess. | 28. Ilio-pectineal Eminence. |
| 13. Anterior Inferior Spinous Pro- | 29. Acetabulum. |
| 14. Posterior Margin—Semilunar | 30. Rim of Acetabulum. |
| Notch. | 31. Cotyloid Notch. |
| 15. Posterior Inferior Spinous Pro- | 32. Semilunar Surface. |
| cess. | 33. Surface for Ligamentum Teres. |

FIG. III. FEMUR.

- | | |
|------------------------|----------------------------|
| 1. Superior Extremity. | 4. Trochanter Minor. |
| 2. Head. | 5. Trochanter Mjr. |
| 3. Neck. | 6. Intertrochanteric Line. |

- | | |
|---------------------------------------|----------------------------|
| 7. Shaft. | 10. Inferior Extremity. |
| 8. Internal Division of Linea Aspera. | 11. External Condyle. |
| 9. External Division of Linea Aspera. | 12. Internal Condyle. |
| | 13. Inter-condyloid Notch. |

FIG. IV. PATELLA—ANTERIOR SURFACE.

- | | |
|-----------------------------|----------|
| 1. Base or Superior Border. | 2. Apex. |
|-----------------------------|----------|

FIG. V. TIBIA.

- | | |
|-------------------------------------|------------------------------------|
| 1. Crest of Tibia. | 7. Apices of Spine. |
| 2. Superior Extremity. | 8. Sulcus between Apices of Spine. |
| 3. External Tuberosity. | 9. Tubercle. |
| 4. Internal Tuberosity. [Femur. | 10. Inferior Extremity. |
| 5. Articular Facets for Condyles of | 11. Facet for Fibula. |
| 6. Spine of Tibia. | 12. Internal Malleolus. |

FIG. VI. FIBULA.

- | | |
|------------------------|------------------------|
| 1. Superior Extremity. | 3. Crest. |
| 2. Shaft. | 4. External Malleolus. |

PLATE XVII. FIGS. I TO XVI.

FIG. I. PALMAR SURFACE OF THE HAND.

FIG. II. DORSAL SURFACE OF THE HAND.

- | | |
|-----------------------|------------------------------|
| 1. Carpus. | 11. Unciform Process. |
| 2. Scaphoid. | 12. Metacarpus. |
| 3. Semilunar. | 13. Base |
| 4. Cuneiform. | 14. Shaft |
| 5. Pisiform. | 15. Head |
| 6. Trapezium. | 16. First Row of Phalanges. |
| 7. Trapezoid. | 17. Second Row of Phalanges. |
| 8. Os Magnum. | 18. Third Row of Phalanges. |
| 9. Head of Os Magnum. | 19. Sessamoid Bones. |
| 10. Unciform. | |

FIG. III. OS CALCIS—UPPER SURFACE

FIG. IV. OS CALCIS—INFERIOR SURFACE.

- | | |
|---------------------------------|----------------------|
| 1. Body of Calcaneum. | 3. Anterior Process. |
| 2. Tuberosity of the Os Calcis. | 4. Internal Process. |

FIG. V. ASTRAGALUS—SUPERIOR SURFACE.

FIG. VI. SAME BONE—INFERIOR SURFACE.

- | | |
|----------|---------|
| 1. Body. | 2. Head |
|----------|---------|

FIG. VII. SCAPHOID—OUTER SURFACE.

FIG. VIII. SAME—INNER SURFACE.

- | |
|----------------------------|
| 1. Tuberosity of Scaphoid. |
|----------------------------|

- Fig. IX. Internal Cuneiform—Outer Aspect.
 “ X. Internal Cuneiform—Inner Aspect.
 “ XI. Middle Cuneiform—Outer Aspect.
 “ XII. Same—Inner Aspect.
 “ XIII. External Cuneiform—Outer Surface.
 “ XIV. Same—Inner Surface.

FIG. XV. CUBOID—VIEWED EXTERNALLY.

FIG. XVI. SAME—INTERNAL SURFACE.

1. Tuberosity of the Cuboid.

2. Groove for Peroneus Longus.

PLATE XVIII. FIGS. I TO LIV.

In the Carpal Bones,

- | | |
|---------------------------------|-----------------------|
| A. Designates Superior Surface. | D. Posterior Surface. |
| B. Inferior Surface. | E. External Surface. |
| C. Anterior Surface. | F. Internal Surface. |

- Fig. 1. Scaphoid—Anterior Surface.
 “ 2. Same—Posterior Surface.
 “ 3. Same—Superior Surface.
 “ 4. Same—Internal Surface.
 “ 5. Semilunar—Anterior Surface.
 “ 6. Same—Posterior Surface.
 “ 7. Same—Internal and Superior Surface.
 “ 8. Same—Internal and Inferior Surface.
 “ 9. Cuneiform—Anterior Surface.
 “ 10. Same—Posterior Surface.
 “ 11. Same—External Surface.
 “ 12. Same—Inferior Surface.
 “ 13. Pisiform—Anterior Surface.
 “ 14. Same—Posterior Surface.
 “ 15. Same—External Surface.
 “ 16. Same—Internal Surface.
 “ 17. Trapezium—Anterior Surface.
 “ 18. Same—Posterior Surface.
 “ 19. Same—Superior and Internal Surface.
 “ 20. Same—Inferior Surface.
 “ 21. Trapezoid—Superior Surface.
 “ 22. Trapezoid—External Surface.
 “ 23. Trapezoid—Posterior Surface.
 “ 24. Trapezoid—Inferior Surface.
 “ 25. Os Magnum—Anterior Surface.
 “ 26. Os Magnum—Internal Surface.
 “ 27. Os Magnum—External Surface.
 “ 28. Os Magnum—Inferior Surface.

Fig. 29. Unciform—Posterior Surface.

" 30. Unciform—Internal Surface.

" 31. Unciform—External Surface.

" 32. Unciform—Inferior Surface.

G. Unciform Process.

Fig. 33. { Articular Surfaces of
Superior Extremity of First Metacarpal.
Inferior " " " "

" 34. { Superior " " Second "
Inferior " " " "

" 35. { Superior " " Third "
Inferior " " " "

" 36. { Internal Surface " Fourth "
Superior Extremity " " "
Inferior " " " "

" 37. { Superior " " Fifth "
Inferior " " " "

" 38. { Superior " " First Phalanx of Middle Fin.
Inferior " " " " " same. [ger.

" 39. { Superior " " Second " " "
Inferior " " " " " "

" 40. Superior " " Third " " "

Fig. 41. { First Metatarsal Bone.
5. Posterior Exremity, *a*.
6. Anterior Extremity, *b*.

Fig. 42. { Second Metatarsal Bone.
5. Anterior Extremity.
6. Posterior Extremity.

Fig. 43. { Third Metatarsal.
5. Posterior Extremity.
6. Anterior Extremity.

Fig. 44. { Fourth Metatarsal.
5. Posterior Extremity.
6. Anterior Extremity.

Fig. 45. { Fifth Metatarsal.
5. Posterior Extremity.
6. Anterior Extremity.

Fig. 46. { First Phalanx of Great Toe
5. Posterior Extremity.
6. Anterior Extremity.

Fig. 47. { Last Phalanx of Great Toe.
5. Posterior Extremity.

Fig. 48. { First Phalanx of Second
1. Superior Surface. [Toe.
2. Inferior Surface.

Fig. 48. { 3. Internal Border.
4. Posterior Extremity.
5. Anterior Extremity.

Fig. 49. { Second Phalanx of Second
1. Superior Surface. [Toe
2. Inferior Surface.
3. Internal Border.
4. Posterior Extremity.
5. Anterior Extremity.

Fig. 50. { Second Phalanx of Fourth
Superior Surface. [Toe.

Pig. 51. { Third Phalanx of Second
1. Superior Surface. [Toe
2. Inferior Surface.
3. Internal Border.
4. Posterior Extremity.

Fig. 52. { Carpal Extremity of Ulna.
1. Articular Surface of
Wrist Joint.
2. Styloid Process.

Fig. 53. { Sternal End of Clavicle.
Articular Surface.

- | | | | | | | |
|----------|---|---|--|----------|---|---|
| Fig. 54. | { | Patella—Posterior Surface
1, 2. Surfaces of Condyles
of Femur.
3. Ridge dividing them. | | Fig. 54. | { | 4. Superior Border.
5. Inferior Border.
6. Inner Border.
7. External Border. |
|----------|---|---|--|----------|---|---|

PLATE XIX. FIGS. I TO VII.

FIG. I. SCAPULA—DORSAL SURFACE.

- | | |
|---|---|
| 1. Supra-spinous Fossa.
2. Triangular Surface at Vertebral
Border.
3. Spine.
4. Its Inferior Surface.
5. Its External Border.
6. Acromion Process.
7. Tip of Acromion.
8. Coracoid Process. | 9. Infra-spinous Fossa.
10. Superior Angle.
11. Glenoid Cavity.
12. Neck.
13. External or Axillary Border.
14. Internal or Vertebral Border.
15. Superior Border.
16. Superior Angle.
17. Inferior Angle. |
|---|---|

FIG. II. SCAPULA—VENTRAL ASPECT.

- | | |
|---|--|
| 1. Sub-scapular Fossa.
2. Root of Coracoid Process.
3. Tip of same.
4. Supra-scapular Notch.
5. Superior Border.
6. Axillary Border.
7. Vertebral Border. | 8. Spine.
9. Acromion Process.
10. Facet for Clavicle.
11. Glenoid Cavity.
12. Neck.
13. Superior Angle.
14. Inferior Angle. |
|---|--|

FIG. III. SCAPULA—EXTERNAL ASPECT.

- | | |
|---|---|
| 1. Glenoid Cavity.
2. Sub-scapular Fossa.
3. Inferior Angle.
4. Root of Coracoid Process.
5. Insertion of Biceps.
6. Superior Angle. | 7. Supra-spinous Fossa.
8. Neck.
9. Spine.
10. Infra-spinous Fossa.
11. Acromion Process. |
|---|---|

FIG. IV. MANUBRIUM. FIG. V. GLADIOLUS.

FIG. VI. ENSIFORM APPENDIX.

- | | |
|---|--|
| 1. Manubrium.
2. Interclavicular Notch.
3, 3. Facets for Clavicles. [iolus.
4. Joint of Manubrium and Gad- | 5, 5. Facets for Costal Cartilages.
6, 6. Free Borders of the Bone.
7. Joint of Gladiolus and Ensiform
Cartilage. |
|---|--|

FIG. VII. CLAVICLE—INFERIOR ASPECT.

- | | |
|--|------------------------|
| 1. Sternal Extremity.
2, 2. Surfaces for Ligaments. | 3. Acromial Extremity. |
|--|------------------------|

PLATE XX. FIGS. I TO XIX.

EXTREMITIES AND ARTICULAR SURFACES OF LONG BONES.

FIG. I. HEAD OF HUMERUS.

- | | |
|------------------------|----------------------|
| 1. Articular Surface. | 4. Bicipital Groove. |
| 2. Greater Tuberosity. | 5. Anatomical Neck. |
| 3. Lesser Tuberosity. | |

FIG. II. FŒTAL HUMERUS.

- | | | |
|----------|---------------------|-----------|
| 1. Head. | 2. Lower Extremity. | 3. Shaft. |
|----------|---------------------|-----------|

FIGS. III, IV. UPPER EXTREMITY OF ULNA—SIDE AND POSTERIOR ASPECTS.

- | | |
|-----------------------|----------------------------|
| 1. Olecranon Process. | 3. Greater Sigmoid Cavity. |
| 2. Coronoid Process. | 4. Lesser Sigmoid Cavity. |

FIG. V. HUMERAL FACET OF RADIUS.

1. Surface for Capitellum.

FIG. VI. FŒTAL RADIUS.

- | | | |
|----------|----------------------|-----------|
| 1. Head. | 2. Carpal Extremity. | 3. Shaft. |
|----------|----------------------|-----------|

FIG. VII. LOWER EXTREMITY OF HUMERUS.

- | | |
|--------------------------|----------------------|
| 1, 2. Trochlear Surface. | 5. External Condyle. |
| 3. Capitellum. | 6. Coronoid Fossa. |
| 4. Internal Condyle. | 7. Olecranon Fossa. |

FIG. VIII. CARPAL EXTREMITY OF RADIUS.

- | | |
|----------------------------|-----------------------|
| 1. Facet for Scaphoid. | 5. Styloid Process. |
| 2. Ridge dividing it from— | 6. Anterior Surface. |
| 3. Facet for Semilunar. | 7. Posterior Surface. |
| 4. Facet for Ulna. | |

FIG. IX. UPPER EXTREMITY OF FEMUR.

- | | |
|--|-----------------------------|
| 1. Facet for Acetabulum. | 4. Trochanter Major. |
| 2. Edge of Cartilaginous Covering of Head. | 5. Trochanter Minor. |
| 3. Neck. | 6. Inter-trochanteric Line. |
| | 11. Shaft. |

FIG. X. FŒTAL FEMUR.

- | | |
|----------------------|--------------|
| 1. Head. | 4. Shaft. |
| 2. Trochanter Major. | 5. Condyles. |
| 3. Trochanter Minor. | |

FIG. XI. UPPER EXTREMITY OF TIBIA.

- | | |
|-------------------------------------|----------------------|
| 1. Spine. | 5. Outer Tuberosity. |
| 2, 3. Facets for Condyles of Femur. | 6. Inner Tuberosity. |
| 4. Tubercle for Ligamentum Patellæ | |

FIG. XII. UPPER ASPECT OF SAME.

- | | | |
|-----------------------------------|------|--------------------------------------|
| 1. Ridge for Soleus. | [læ. | 4, 5. Surface for Crucial Ligaments. |
| 2. Tubercle for Ligamentum Patel- | | |
| 3. Spine. | | 6, 7. Semilunar Cartilage. |

FIG. XIII. LOWER EXTREMITY OF FEMUR.

- | | |
|----------------------------------|-------------------------------------|
| 8. Internal Tuberosity. | 20. Groove for origin of Popliteus. |
| 13, 14. Bifurcated Linea Aspera. | 21. Inner Condyle. |
| 15. Popliteal Space: | 22. Outer Condyle. |
| 19. External Tuberosity. | |

FIG. XIV. LOWER EXTREMITY OF TIBIA.

- | | |
|----------------------|-----------------------------|
| 12. Inner Malleolus. | 13. Surface for Astragalus. |
|----------------------|-----------------------------|

FIG. XV. INFERIOR ASPECT OF SAME.

- | | |
|------------------------|----------------------------------|
| 1. Anterior Surface. | 4. Same Surface of Inner Malleo- |
| 2. Posterior Surface. | 5. Inner Malleolus. [lus. |
| 3. Astragular Surface. | 6. Facet for Fibula. |

FIG. XVI. FŒTAL TIBIA.

- | | | |
|---------------------|-----------|----------------------|
| 1. Upper Extremity. | 2. Shaft. | 3. Tarsal Extremity. |
|---------------------|-----------|----------------------|

FIG. XVII. FŒTAL FIBULA.

- | | | |
|----------|-----------|------------------------|
| 1. Head. | 2. Shaft. | 3. External Malleolus. |
|----------|-----------|------------------------|

FIG. XVIII. UPPER EXTREMITY OF FIBULA.

1. Head.

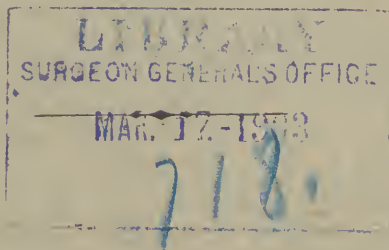
FIG. XIX. LOWER EXTREMITY OF FIBULA.

- | | |
|-----------------------------------|--------------------------|
| 6. Outer Surface of External Mal- | 7. Surface for Tibia. |
| leolus. | 8. Facet for Astragalus. |

Part 2.

Descriptive Anatomy
OF THE
HUMAN BODY,
FORMING
A TEXT BOOK
TO THE
ATLAS OF HUMAN ANATOMY.

BY
J. A. JEANCON, M. D.



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SYNDESMOLOGY.

PLATE I.

LIGAMENTS OF THE HEAD AND CERVICAL VERTEBRA.

FIG. I.

- | | |
|---------------------------------|--|
| I. Sphenoid. | 12. Carotid Canal. |
| 1. Alæ Magnæ. | iv. Parietal. |
| 2. Pterygoid Processes. | v. Malar. |
| 3. External Plate. | vi. Superior Maxillary. |
| 4. Internal Plate. | 13. Palate Process. |
| 5. Hamular Process. | 14. Incisive Foramen. |
| II. Occipital. | 15. Alveolar Process. |
| a. Basilar Portion. | vii. Palate Bone. |
| b. Occipital Portion. | 16. Horizontal Portion. |
| c. Condylloid Portion. | 17. Pterygo-palatine Foramen. |
| 6. Condyle. | viii. Vomer. |
| 7. Anterior Condylloid Foramen. | 18. Middle Turbinated Bone. |
| III. Temporal. | ix. Lower Maxillary. |
| a. Squamous Portion. | 19. Angle. |
| b. Mastoid Portion. | 20. Condylloid Process. |
| c. Petrous Portion. | 21. Coronoid Process. |
| 8. Zygomatic Process. | 22. Sphenoidal Fissure. |
| 9. Mastoid Process. | a. Capsular Ligament of Temporomaxillary Articulation. |
| 10. Styloid Process. | β. Lateral Ligament. |
| 11. Foramen Lacerum Posterius. | |

FIGS. II AND III. SAME.

FIG. II. EXTERNAL VIEW. FIG. III. INTERNAL VIEW.

- | | |
|-------------------------|---------------------------------|
| I. Sphenoid. | 10. Meatus Auditorius Externus. |
| 1. Sphenoidal Sinus. | iv. Upper Maxillary. |
| 2. Great Wings. | 11. Alveolar Process. |
| 3. Pterygoid Processes. | 12. Palate Process. |
| II. Occipital Bone. | 13. Inferior Turbinated |
| 4. Basilar Portion. | v. Inferior Maxillary. |
| 5. Pars Condylloideus. | 14. Angle. |
| III. Temporal. | 15. Coronoid Process. |
| 6. Petrous Portion. | 16. Condylloid Process. |
| 7. Mastoid Process. | a. Internal Lateral Ligament. |
| 8. Zygomatic Process. | b. External Lateral Ligament. |
| 9. Styloid Process. | c. Stylo-maxillary Ligament. |

FIG. IV.

- | | |
|--------------------------------------|-------------------------------------|
| I. Inferior Maxillary. | 5. Porus Acusticus Externus. |
| 1. Angle. | 6. Zygomatic Process. |
| 2. Coronoid Process. | 7. Glenoid Fossa. |
| 3. Condylod Process. | a. Capsular Ligament. |
| 4. Articular Surface of the Condyle. | b. Inter-articular Fibro-cartilage. |
| II. Temporal. | |

FIGS. V. TO XI. ARTICULATIONS OF THE SPINE WITH THE OCCIPITAL BONE.

- | | |
|-----------------------------------|--------------------------------------|
| I. Occipital. | 18. Odontoid Process. |
| 1. Basilar Portion. | 19. Inter-vertebral Foramen. |
| 2. Clivus Blumenbachii. | 20. Transverse Process. |
| 3. Occipital Portion. | 21. Arch. |
| 4. Inner Occipital Crest. | 22. Spinous Process. |
| 5. Condylod Portion. | IV. Third Cervical Vertebra. |
| 6. Anterior Condylod Foramen. | 23. Body. |
| 7. Internal Opening of same. | 24. Transverse Process. |
| II. Atlas. | 25. Articular Process. |
| 8. Anterior Arch. | 26. Spinous Process. |
| 9. Its Tubercle. | a. Capsular Ligament. [ment. |
| 10. Posterior Arch. | b. Anterior Occipito-atloid Liga- |
| 11. Spinous Tubercle. | c. Posterior Occipito-atloid Liga- |
| 12. Transverse Processes. | ment. |
| 13. Foramen for Vertebral Artery. | d. Anterior Common Ligament. |
| 14. Superior Articular Processes. | e. Posterior Surface of b. |
| 15. Inferior Articular Processes. | f. Lateral Check Ligaments. |
| 16. Tubercles for Transverse Lig- | g. Lateral Occipito-atloid Ligament. |
| III. Axis. [ament. | h. Occipito-axoid Ligament |
| 17. Body. | i. Transverse Ligament of Atlas. |

- FIG. VI. { a. Transverse Ligament.
 { β. Surface articulating with Odontoid.
 { γ. Anterior Arch of Atlas, Articular Cartilage.

- | | |
|--------------------------|------------------------------|
| k. Anterior Atlo-axoid. | m. Ligamentum Subflava. |
| l. Posterior Atlo-axoid. | n. Anterior Common Ligament. |

PLATE II.

LIGAMENTS OF VERTEBRÆ AND RIBS.

- Fig. I. Lumbar Vertebræ.
 " II. Dorsal Vertebræ—Side view.
 " III. Arches of Cervical Vertebræ—Internal Aspect.
 " IV. Arches of Dorsal Vertebræ—Inner Aspect.
 " V. Dorsal Vertebræ and one Rib.
 " VI. Dorsal vertebræ and two Ribs—Side view.

- | | |
|-------------------------------------|---|
| 1. Body of Vertebrae. | <i>c.</i> Inter-vertebral Substance. |
| 2. Arch. | <i>d.</i> Ligamentum Subflava. |
| 3. Transverse Processes. | <i>e.</i> Inter-spinous. |
| 4. Articular Processes. | <i>f.</i> Supra-spinous. |
| 5. Spinous Process. | <i>g.</i> Inter-transverse. |
| 6. Facet for Rib on the Body. | <i>h.</i> Capsular. [bral. |
| 7. Facet for Rib on Transverse Pro- | <i>i.</i> Stellate or Anterior Costo-verte- |
| 8. Inter-vertebral Foramen. [cess. | <i>k.</i> Posterior Costo-transverse. |
| 9. Ribs. | <i>l.</i> Anterior Costo-transverse. |
| <i>a.</i> Anterior Common Ligament. | <i>m.</i> Capsular. |
| <i>b.</i> Posterior Common. | |

FIGS. VII TO IX. STERNUM AND CLAVICLE.

FIG. VII. ANTERIOR VIEW.

FIG. VIII. POSTERIOR VIEW.

FIG. IX. STERNO-CLAVICULAR JOINT.

- | | |
|--|--|
| 1. Manubrium. | <i>c.</i> Intercostal Ligaments. |
| 2. Gladiolus. | <i>b.</i> Periosteum. |
| 3. Xiphoid Cartilage. | <i>e.</i> Costo-xiphoid Ligaments. |
| 4. Sternal end of Clavicle. | <i>f.</i> Inter-clavicular. |
| 5. Costal Cartilages. | <i>g.</i> Anterior Sterno-clavicular. |
| 6. Intercostal Muscles. | <i>h.</i> Posterior Sterno-clavicular. |
| <i>a.</i> Anterior Costo-sternal Ligament. | <i>i.</i> Rhomboid. |
| <i>b.</i> Same. | <i>k.</i> Inter-articular Fibro-cartilage. |

PLATE III.

LIGAMENTS OF UPPER EXTREMITY.

FIGS. I TO III. SHOULDER JOINT.

FIGS. IV TO IX. ELBOW JOINT.

- | | |
|--------------------------|--|
| I. Scapula. | 9. Body or Shaft. |
| 1. Venter. | III. Humerus. |
| 2. Dorsum. | 10. Head. |
| 3. Spine. | <i>a.</i> Acromio-clavicular Ligament. |
| 4. Acromion. | <i>b.</i> Trapezoid. |
| 5. Coracoid. | <i>c.</i> Coraco-acromial. |
| 6. Supra-scapular Notch. | <i>d.</i> Transverse. |
| 7. Head. | <i>e.</i> Conoid. |
| II. Clavicle. | <i>f.</i> Capsular. |
| 8. Acromial Extremity. | <i>g.</i> Tendon of Biceps. |

FIGS. IV TO IX.

- | | |
|------------------------|---------------|
| I. Humerus. | 5. Trochlea. |
| 1. Inferior Extremity. | II. Ulna. |
| 2. Internal Condyle. | 6. Olecranon. |
| 3. External Condyle. | 7. Coronoid. |
| 4. Capitulum. | III. Radius. |

- | | |
|------------------------------|-----------------------------|
| 8. Head. | <i>c.</i> External Lateral. |
| 9. Tubercle. | <i>d.</i> Annular Ligament. |
| <i>a.</i> Capsular Ligament. | <i>e.</i> Oblique. |
| <i>b.</i> Internal Lateral. | |

PLATE IV.

LIGAMENTS OF THE HAND.

FIGS. I TO V. CARPUS.

- Fig. I. Second Row—Digital Aspect.
 “ II. Second Row—Brachial Aspect.
 First Row—Digital Aspect.
 “ III. Longitudinal Section.
 “ IV. Dorsal Aspect of Carpus.
 “ V. Palmar Aspect of same.
 “ VI. Hand—Dorsal Surface.
 “ VII. Same—Palmar Surface.
 “ VIII. Longitudinal Section of a Digit.

- | | |
|--|---|
| i. Ulna. | <i>g.</i> Internal Lateral. |
| 1. Styloid Process. | <i>h.</i> External Lateral. |
| II. Radius. | <i>i.</i> Ligament from Pisiform to Fifth Metacarpal. |
| 2. Styloid Process. | <i>k.</i> Palmar Ligament. [ond |
| III. Carpus. | <i>l.</i> Interosseous Ligaments of Sec- |
| 3. Scaphoid. | <i>m.</i> Carpo-metacarpal Ligaments. |
| 4. Semi-lunar. | <i>n.</i> Anterior Ligaments. |
| 5. Cuneiform. | <i>o.</i> External Lateral of Carpus. |
| 6. Pisiform. | <i>p.</i> Superficial Palmar of Third Metacarpus. |
| 7. Trapezium. | <i>q.</i> Same of Second Metacarpal. |
| 8. Trapezoid. | <i>r.</i> Dorsal of Metacarpo-phalangeal Joint. |
| 9. Os Magnum. | <i>s.</i> Dorsal of Metacarpals. |
| 10. Unciform Process. | <i>t.</i> Synovial Membrane. [langes. |
| IV. Metacarpus. | <i>u.</i> Synovial Membranes of Pha- |
| v. Phalanges. | <i>v. z.</i> External Lateral Ligaments of Digits. |
| <i>a.</i> Membrana Sacciformis. | <i>w, y.</i> Internal Lateral of Finger. |
| <i>b.</i> Its Palmar Surface. [Joint. | <i>x.</i> Metacarpal Interosseous. |
| <i>c.</i> Synovial Membrane of Wrist | |
| <i>d.</i> Same—Palmar Aspect. | |
| <i>e.</i> Anterior Ligament of Carpus. | |
| <i>f.</i> Posterior. | |

PLATE V.

LIGAMENTS OF PELVIS.

- | | |
|--------------------------|----------------------------|
| Fig. I. Anterior Aspect. | Fig. IV. Inner Surface. |
| “ II. Posterior Aspect. | “ V. Coxo-femoral Joint. |
| “ III. External Aspect. | “ VI. Same—Sectional View. |

- A. Ilium.
- 1. Crest.
- 2. Anterior Superior Spine.
- 3. Anterior Inferior Spine.
- 4. Posterior Superior Spine.
- 5. Posterior Inferior Spine.
- B. Ischium.
- 6. Descending Ramus.
- 7. Ascending Ramus.
- 8. Tuberosity.
- 9. Spine.
- C. Pubes.
- 10. Horizontal Ramus.
- 11. Descending Ramus.
- 12. Obturator Foramen.
- 13. Acetabulum.
- D. Sacrum.
- E. Coccyx.
- F. Last Lumbar Vertebra.
- 14. Transverse Process.
- 15. Articular Process.
- 16. Anterior Sacral Foramina.
- 17. Posterior Sacral Foramina.
- 18. Spinous Process.
- G. Femur.

- 19. Head.
- 20. Trochanter Major.
- 21. Trochanter Minor.
- a. Inter-vertebral Substance.
- b. Anterior Common
- c. Supra-spinous Common
- d. Inter-spinous Common
- e. Anterior Sacro-coccygeal
- f, g. Posterior Sacro-coccygeal
- h. Lumbo-iliac
- i. Lumbo-sacral
- k. Anterior Sacro-iliac
- l, m, n, o. Posterior Sacro-iliac
- p. Oblique Portion of same
- q. Great Sacro-sciatic
- r. Lesser Lacro-sciatic
- s. Obturator Membrane.
- t. Symphysis Pubis Anterior Lig.
- u. Sub-pubic Pubis Anterior Lig.
- v. Inter-articular Cartilage.
- w. Cotyloid Ligament.
- x. Ligamentum Teres.
- y. Reflected Synovial Membrane.
- z. Capsular Ligament.

LIGAMENT.

PLATE VI.

- Fig. I. Anterior View of Knee Joint.
 " II. Inner Aspect.
 " III. External Aspect.
 " IV. Laid Open.
 " V. Longitudinal Section.
 " VI. Posterior View.

- A. Femur.
- 1. External Condyle.
- 2. Internal Condyle.
- 3. Articular Surface.
- B. Patella.
- C. Tibia.
- 4. Tuberosities.
- D. Fibula.
- 5. Head.
- a. Tendon of Quadriceps Extensor.
- b. Ligamentum Patellæ.
- c. Capsular Ligament.

- d. Ligamentum Mucosum.
- e. External Lateral Ligament.
- f, g. Internal Lateral Ligament.
- h. Ligamentum Posticum Winslowii.
- i. Anterior Tibio-fibular Ligament.
- k, l. Posterior Tibio-fibular Ligament.
- m. Capsular Ligament.
- n. Posterior or Internal Crucial Lig.
- o. Anterior or External Crucial Lig.
- p. External Semilunar Cartilage.
- q. Internal Semilunar Cartilage.
- r. Transverse Ligament.

s. Coronary.
t. Bursa.
u. Tendon of Popliteus.

v. Tendon of Biceps Femoris.
w. Tendon of Semi-membranosus.

PLATE VII.

LIGAMENTS OF FOOT

Fig. I. Dorsum of Foot.
 " II. Plantar Surface.
 " III. Leg and Foot.
 " IV. Ligaments of Dorsum of Foot.
 " V. Ligaments of Plantar Surface.

I. Tibia.
 1. Anterior Border.
 2. Internal Malleolus.
 II. Fibula.
 3. External Malleolus.
 III. Astragalus.
 4. Head.
 IV. Os Calcis.
 5. Tuberosity.
 6. Anterior Process.
 7. Internal Process.
 V. Scaphoid.
 Tuberosity.
 VI. Internal Cuneiform.
 VII. Middle Cuneiform.
 XIII. External Cuneiform.
 IX. Cuboid.
 X. Metatarsus.
 XI. Phalanges.
a. Interosseous Membrane.
b. Anterior Inferior Tibio-fibular
 Ligament.
c. Anterior Annular Ligament.
d. Posterior Tibio-fibular.
e. External Calcaneo-astragaloid.

f. Superior Astragalo-scaphoid.
g. Superior Calcaneo-cuboid.
h. Inferior Calcaneo-scaphoid.
i. Short Calcaneo-cuboid.
k, l. Long Calcaneo-cuboid.
m. Dorsal Ligaments between Cu-
 boid and Scaphoid.
n. Scaphoid and Third Cuneiform.
o. Scaphoid and Middle Cuneiform
p. Scaphoid and First Cuneiform.
q, r, s. Cuboid and three Cuneiform.
t. Tarso-metatarsal, Dorsal. Fifth.
u. Tarso-metatarsal, Dorsal. Fourth.
v. Tarso-metatarsal, Dorsal. Third.
w, x, y. Tarso-metatarsal, Dorsal.
z. Dorsal, Metatarsal. [Second.
a. Inferior Calcaneo-scaphoid.
β. Plantar Ligament between Sca-
 phoid and First Cuneiform.
γ. Cuboid and Third Cuneiform.
δ. Second and Third Metatarsals.
ε. Plantar Metatarsal.
ζ. Second Plantar Metatarsal.
η. Fifth Plantar Metatarsal.
θ. First Plantar Metatarsal.

MYOLOGY.

PLATE I.

MUSCLES OF UPPER EXTREMITY.

FIG. I. MUSCULAR FIBRE. FIG. II. TENDINOUS FIBRE.

- A. Clavicle.
 - B. Scapula.
 - C. Humerus.
 - D. Ulna.
 - E. Radius.
 - F. Scaphoid.
 - G. Semilunar.
 - H. Cuneiform.
 - I. Pisiform.
 - K. Trapezium.
 - L. Trapezoid.
 - M. Os Magnum.
 - N. Unciform.
 - O. Metacarpus.
 - P. First Phalanges.
 - Q. Second Phalanges.
 - R. Ungual Phalanges.
 - T. Palmar Fascia.
 - U. Annular Ligament.
 - V. Vaginal Ligaments.
 - a. Acromial end of Clavicle.
 - b. Venter of Scapula.
 - c. Cervix Scapulæ.
 - d. Coracoid Process.
 - e. Acromion.
 - f. Head of Humerus.
 - g. External Condyle.
 - h. Internal Condyle.
 - i. Head
 - k. Capitulum
 - l. Tubercle
 - m. Inferior Extremity
 - n. Styloid Process
 - o. Upper Extremity
 - p. Coronoid Process
 - q. Lower Extremity
- } of Radius.
- } of Ulna.

- 1. Coraco-brachialis.
- 2. Biceps.
 - a. Short Head.
 - β. Long Head.
 - γ. Bicipital Fascia.
 - δ. Tendon of insertion.
- 3. Brachialis Anticus.
- 4. Triceps.
 - a. Long Head.
 - β. External Head.
 - γ. Internal Head.
- 5. Anconeus Parvus.
- 6. Supinator Longus.
- 7. Supinator Brevis.
- 8. Pronator Radii Teres.
- 9. Pronator Quadratus.
- 10. Flexor Carpi Ulnaris.
- 11. Extensor Carpi Ulnaris.
- 12. Flexor Carpi Radialis. [ior.
- 13. Extensor Carpi Radialis Long-
- 14. Extensor Carpi Radialis Brevior.
- 15. Palmaris Longus.
- 15. Palmar Fascia.
- 16. Palmaris Brevis.
- 17. Flexor Sublimis Digitorum.
- 17. Its four Tendons to the Fingers.
- 18. Flexor Profundus Digitorum.
- 18. Its four Tendons.
- 19. Lumbricales.
- 20. Extensor Communis Digitorum.
- 21. 22. Interossei.
- 23. Extensor Longus Pollicis.
- 24. Extensor Brevis Pollicis.
- 25. Flexor Longus Pollicis.
- 26. Flexor Brevis Pollicis. [licis.
- 27. Extensor Ossis Metacarpi Pol-

- | | |
|------------------------|----------------------------------|
| 28. Abductor Pollicis. | 33. Flexor Brevis Minimi Digiti. |
| 29. Adductor Pollicis. | 34. Abductor Minimi Digiti. |
| 30. Opponens Pollicis. | 35. Adductor Minimi Digiti. |
| 31. Extensor Indicis. | 36. Deltoid. |
| 32. Abductor Indicis. | |

PLATE II.

(LETTERS SAME AS PLATE I.)

- | | |
|--------------------------------------|---|
| 1. Coraco-brachialis. | 14, 15. Interossei. |
| 2. Triceps. | 16. Extensor Primi Internodii Pollicis. |
| 3. Anconeus. | 17. Extensor Secundi Internodii Pollicis. |
| 4. Supinator Longus. | 18. Extensor Ossis Metacarpi Pollicis. |
| 5. Supinator Brevis. | 19. Extensor Indicis. [licis. |
| 6. Pronator Radii Teres. | 20. Abductor Indicis. |
| 7. Pronator Quadratus. | 21. Subanconeus. |
| 8. Flexor Carpi Ulnaris. | 22. Supra-spinatus. |
| 9. Extensor Carpi Ulnaris. [oir. | 23. Infra-spinatus. |
| 10. Extensor Carpi Radialis Long. | 24. Teres Minor. |
| 11. Extensor Carpi Radialis Brevior. | 25. Teres Major. |
| 12. Extensor Communis Digitorum. | |
| 13. Extensor Minimi Digiti. | |

PLATE III.

MUSCLES OF THE LOWER EXTREMITY.

- | | |
|--------------------------------|---------------------------|
| A. Last Dorsal Vertebra. | l. External Condyle. |
| B. Lumbar Vertebrae. | m. Inner Condyle. |
| C. Sacrum. | n. Tuberosity of Tibia. |
| D. Ilium. | o. Head of Fibula. |
| E. Pubes. | p. Semilunar Cartilages. |
| F. Ischium. | q. Ligamentum Patellæ. |
| G. Femur. | 1. Psoas Magnus. |
| H. Tibia. | 2. Psoas Parvus. |
| I. Fibula. | 3. Iliacus Internus. |
| K. Patella. | 4. Tensor Vaginæ Femoris. |
| a. Crest of Ilium. | 5. Sartorius. |
| b. Anterior Superior Spine. | 6. Rectus. |
| c. Horizontal Ramus of Pubes. | 7. Vastus Internus. |
| d. Descending Ramus of same. | 8. Vastus Externus. |
| e. Ascending Ramus of Ischium. | 9. Crureus. |
| f. Descending Ramus of same. | 10. Pectineus. |
| g. Tuberosity of same. | 11. Adductor Longus. |
| h. Head of Femur. | 12. Adductor Brevis. |
| i. Trochanter Major. | 13. Adductor Magnus. |
| k. Trochanter Minor. | 14. Gracilis. |

- | | |
|----------------------|-------------------------|
| 15. Semimembranosus. | 20. Obturator Externus. |
| 16. Semitendinosus. | 21. Piriformis. |
| 17. Biceps. | 22. Quadratus Femoris. |
| 18. Gluteus Medius. | 23. Subcrureus. |
| 19. Gluteus Minimus. | |

PLATE IV.

LETTERS SAME AS IN PLATE III, EXCEPTING—

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|---------------------------------------|----------------------|
| A, B. Coccygeal Vertebra. | 15. Adductor Magnus. |
| n. Posterior Inter-trochanteric Line. | 16. Pectineus. |
| 5. Gluteus Magnus. | 17. Gracilis. |
| 6. Gluteus Medius. | 18. Sartorius. |
| 7. Gluteus Minimus. | 19. Rectus. |
| 8. Piriformis. | 20. Vastus Externus. |
| 9. Gemelli. | 21. Vastus Internus. |
| 10. Obturator Internus. | 22. Crureus. |
| 11. Obturator Externus. | 23. Biceps. |
| 12. Quadratus Femoris. | 24. Semitendinosus. |
| 13. Adductor Longus. | 25. Semimembranosus. |
| 14. Adductor Brevis. | |

PLATE V.

MUSCLES OF LOWER EXTREMITY.

- | | |
|------------------------------|--------------------------------|
| A. Femur. | 2. Tibialis Anticus. |
| B. Tibia. | 3. Tibialis Posticus. |
| C. Fibula. | 4. Peroneus Longus. |
| D. Os Calcis. | 5. Peroneus Brevis. |
| E. Astragalus. | 6. Peroneus Tertius. |
| F. Scaphoid. | 7. Gastrocnemius. |
| G. First Cuneiform. | 8. Soleus. |
| H. Second Cuneiform. | 9. Plantaris. |
| I. Third Cuneiform. | 10. Flexor Longus Digitorum. |
| K. Cuboid. | 11. Flexor Accessorius. |
| L. Metatarsus. | 12. Flexor Brevis Digitorum. |
| M. First Phalanges. | 13. Lumbricales. |
| N. Second Phalanges. | 14. Extensor Longus Digitorum. |
| O. Third Phalanges. | 15. Extensor Brevis Digitorum. |
| P. Sessamoid Bones. | 16, 17. Interossei. |
| a. Upper Extremity of Tibia. | 18. Extensor Longus Pollicis. |
| b. Lower Extremity of same. | 19. Extensor Brevis Pollicis. |
| c. Internal Malleolus. | 20. Flexor Longus Pollicis. |
| d. External Malleolus. | 21. Flexor Brevis Pollicis. |
| e. Head of Fibula. | 22. Abductor Pollicis. |
| 1. Popliteus. | 23. Adductor Pollicis. |

- | | |
|----------------------------------|-----------------------------|
| 24. Transversus Pedis. | 26. Abductor Minimi Digiti. |
| 25. Flexor Brevis Minimi Digiti. | |

PLATE VI.

MUSCLES OF THE HEAD, NECK, AND TRUNK.

- | | |
|-------------------------------------|----------------------------------|
| A. Processus Mastoideus. | 16. Masseter. |
| B. Inferior Maxillary. | 17. Risorius. |
| C. Sternum. | 18. Depressor Anguli Oris. |
| D. Clavicle. | 19. Depressor Labii Inferioris. |
| E. Scapula. | 20. Levator Menti. |
| F. Humerus. | 21. Platysma Myoides. |
| G. Ribs. | 22. Sterno-cleido-mastoid. |
| H. Pelvis. | 23. Trapezius. |
| I. Femur. | 24. Deltoid. |
| a. Manubrium. | 25. Subclavius. |
| b. Gladiolus. | 26. Pectoralis Major. |
| c. Ensiform Appendage. | 27. Pectoralis Minor. |
| d. Sternal End | 28. Serratus Magnus. |
| e. Acromial End | 29. Latissimus Dorsi. |
| f. Coracoid Process. | 30. External Oblique of Abdomen. |
| g. Ilium. | 31. Rectus Abdominis. |
| h. Pubes. | 32. Pyramidalis. |
| i. Ischium. | 33. Internal Oblique. |
| k. Symphysis Pubis. | 34. Transversalis. |
| l. Spermatic Cord and Testicle. | 35. Triangularis Sterni. |
| 1, 2, 6. Occipito-frontalis. | 36. Subscapularis. |
| 3. Temporal. | 37. Teres Major. |
| 4. Attolens Aurem. | 38. Coraco-brachialis. |
| 5. Attrahens Aurem. | 39. Biceps. |
| 7. Orbicularis Palpebrarum. | 40. Sartorius. |
| 8. Compressor Naris. | 41. Pectineus. |
| 9. Orbicularis Oris. [Nasi. | 42. Adductor Longus. |
| 10. Levator Labii Superioris Alæque | 43. Gracilis. |
| 11. Levator Labii Superioris. | 44. Psoas Magnus. |
| 12. Levator Anguli Oris. | 45. Iliacus. |
| 13. Zygomaticus Minor. | 46. Tensor Vaginæ Femoris. |
| 14. Zygomaticus Major. | 47. Gluteus Medius. |
| 15. Buccinator. | 48. Rectus Femoris. |

PLATE VII.

- | | |
|-----------------------|--|
| A. Occipital Bone. | E to I and small letters same as |
| B. Cervical Vertebrae | Plate VI. |
| C. Dorsal Vertebrae. | 1, 2, 3, 4, 5, 6, 7. Same as Plate VI. |
| D. Lumbar Vertebrae. | 8. Masseter Muscle. |

- | | |
|---------------------------------|---------------------------------|
| 9. Platysma Myoides. | 28. Rectus Abdominis. |
| 10. Depressor Labii Inferioris. | 29. Pyramidalis. |
| 11. Internal Pterygoid. | 30. Gluteus Magnus. |
| 12. Sterno-cleido-mastoid. | 31. Gluteus Medius. |
| 13. Biventer Cervicis. | 32. Tensor Vaginæ Femoris. |
| 14. Splenius Capitis. | 33. Vastus Externus. |
| 15. Splenius Colli. | 34. Rectus Femoris. |
| 16. Levator Anguli Scapulæ. | 35. Sartorius. |
| 17. Scalenus Medius. | 36. Pectineus. |
| 18. Trapezius. | 37. Complexus. |
| 19. Deltoid. | 38. Trachelo-mastoid. |
| 20. Infra-spinatus. | 39. Transversalis Colli. |
| 21. Teres Minor. | 40. Inter-transversalis. |
| 22. Teres Major. | 41. Inter-spinales. |
| 23. Latissimus Dorsi. | 42. External Inter-costals. |
| 24. Serratus Magnus. | 43. Internal Inter-costals. |
| 25. Pectoralis Major. | 44. Multifidus Spinæ. |
| 26. Pectoralis Minor. | 45. Internal Abdominal Oblique. |
| 27. External Oblique. | 46. Transversalis Abdominis. |

PLATE VIII.

- | | |
|----------------------------------|---------------------------------|
| <i>k.</i> Sacrum. | 18. Sacro-lumbalis. |
| <i>l.</i> Coccyx. | 19. External Inter-costals. |
| Other letters same as Plate VII. | 20. Serratus Magnus. |
| 1, 2. Occipito-frontalis. | 21. Internal Abdominal Oblique. |
| 3. Temporal. | 22. External Oblique. |
| 4. Masseter. | 23. Transversalis. |
| 5. Internal Pterygoid. | 24. Supra-spinatus. |
| 6. Splenius Capitis. | 25. Infra-spinatus. |
| 7. Biventer Cervicis. | 26. Teres Minor. |
| 8. Trapezius. | 27. Teres Major. |
| 9. Levator Anguli Scapulæ. | 28. Triceps. |
| 10. Splenius Colli. | 29. Deltoid. |
| 11. Rhomboideus Minor. | 30. Gluteus Maximus. |
| 12. Rhomboideus Major. | 31. Gluteus Medius. |
| 13. Serratus Posticus Superior. | 32. Vastus Externus. |
| 14. Serratus Posticus Inferior. | 33. Biceps Femoris. |
| 15. Latissimus Dorsi. | 34. Semitendinosus. |
| 16. Spinalis Dorsi. | 35. Adductor Magnus. |
| 17. Longissimus Dorsi. | 36. Gracilis. |

PLATE IX.

- | | |
|--------------------------------------|-----------------------------|
| <i>F.</i> Clavicle. | 1. Biventer Cervicis. |
| Other letters same as former plates. | 2. Inter-spinales Cervicis. |

- | | |
|-----------------------------------|------------------------------|
| 3. Complexus. | 15. Longissimus Dorsi. |
| 4. Trachelo-mastoid. | 16. Sacro-lumbalis. |
| 5. Obliquus Superior. | 17. 18. Levatores Costarum. |
| 6. Obliquus Inferior. | 19. Inter-costales Externi. |
| 7. Rectus Capitis Posticus Major. | 20. Transversalis Abdominis. |
| 8. Rectus Capitis Posticus Minor. | 21. Quadratus Lumborum. |
| 9. Scalenus Medius. | 22. Inter-transversales. |
| 10. Scalenus Posticus. | 23. Transversalis Cervicis. |
| 11. Multifidus Spinæ. | 24. Splenius Colli. |
| 12. Spinalis Cervicis. | 25. Semi-spinalis Dorsi. |
| 13. Spinalis Dorsi. | 26. Coccygeus. |
| 14. Cervicalis Ascendens. | 27. Rotatores Spinæ. |

PLATE X.

Letters same as Plate VIII.

- | | |
|----------------------------------|------------------------|
| 1. Longus Colli. | 8. Psoas Magnus. |
| 2. Scalenus Medius. | 9. Quadratus Lumborum. |
| 3. Rectus Capitis Anticus Major. | 10. Iliacus. |
| 4. Rectus Capitis Anticus Minor. | 11. Coccygeus. |
| 5. Inter-transversales Cervicis. | 12. Supra-spinatus. |
| 6. Scalenus Anticus. | 13. Teres Major. |
| 7. Diaphragm | 14. Teres Minor. |
| | 15. Subscapularis. |

PLATE XI.

MUSCLES OF THE PALATE AND PHARYNX.

FIG. I. POSTERIOR VIEW OF PHARYNX.

FIG. II. SAME—POSTERIOR WALL OF PHARYNX LAID OPEN.

FIG. III. INSERTION OF PHARYNGEAL MUSCLES.

- | | |
|-----------------------------------|------------------------------------|
| 1. Sphenoid. | 18. Cricoid Cartilage. |
| 2. Clivus Blumberbachii. | 19. Rings of Trachea. |
| 3. Posterior surface of Sphenoid. | 20. Epiglottis. |
| 4. Lesser Wings. | 21. Arytænoid Cartilage. |
| 5. Petrous portion of Temporal. | 22. Levator Palati. |
| 6. Mastoid Process. | 23. Tensor Palati. [striCTOR. |
| 7. Styloid Process. | 24. Superior Pharyngeal Con- |
| 8. Pterygoid Process. | 25. Stylo-pharyngeus. |
| 9. Lower Jaw. | 26. Horizontal portion of Tensor |
| 10. Posterior Nares. | 27. Azygos Uvulæ. [Palati. |
| 11. Middle Turbinal Bone. | 28. Palato-glossus. |
| 12. Inferior Turbinal Bone. | 29. Palato-pharyngeus. |
| 13. Vomer. | 30. Pterygoideus Internus. |
| 14. Tongue. | 31. Œsophagus. |
| 15. Hyoid Bone. | 32. Middle Pharyngeal Constrictor. |
| 16. 17. Thyroid Cartilage. | 33. Inferior Constrictor. |

Figs. IV, V and VI are outlines of Figs I, II and III. The letters refer to these outline figures.

PLATE XII.

FIG. I. HYOID AND GLOSSAL MUSCLES.

- | | |
|---------------------------|--|
| 1. Upper Lip. | 17. Thyro-hyoid. |
| 2. Alveolar Process. | 18. Sterno-thyroid. |
| 3. Teeth. | 19. Sterno-hyoid. |
| 4. Gums. | 20. Omo-hyoid. |
| 5. Tongue. | 21. Sterno Cleido Mastoid. |
| 6. Inferior Maxilla. | 22. Right Common Carotid. |
| 7. Os Hyoides. | 23. Superior Laryngeal Nerve. |
| 8. Thyroid Cartilage. | 24. Hypo-glossal Nerve. |
| 9. Thyroid Gland. | 25. Lingual Branch of the Fifth Nerve. |
| 10. Genio-glossus Muscle. | a. Labial Glands. |
| 11. Hyo-glossus. | b. Sublingual Glands. |
| 12. Stylo-glossus. | c. Submaxillary Gland. |
| 13. Stylo-hyoid. | d. Wharton's Duct. |
| 14. Digastric. | e. Parotid Gland. |
| 15. Mylo-hyoid. | f. Lymphatic Glands. |
| 16. Genio-hyoid. | |

FIGS. II TO VIII. MUSCLES OF MASTICATION.

- | | |
|----------------------------|------------------------|
| 1. Temporal Muscle. | 4. External Pterygoid. |
| 2. Masseter—Outer Portion. | 5. Internal Pterygoid. |
| 3. Masseter—Inner Portion. | |

FIGS. IX TO XII. MUSCLES OF FAUCES.

- | | |
|----------------------------|------------------------------------|
| 1. Eustachian Tube. | 9. Azygos Uvulæ. |
| 2. Vomer. | 10. Palato-pharyngeus. |
| 3. Posterior Nares. | 11. Tonsils. |
| 4. Inferior Turbinal Bone. | 12. Stylo-pharyngeus. |
| 5. Velum Pendulum Palati. | 13. Middle Constrictor of Pharynx. |
| 6. Uvula. | 14. Œsophagus. |
| 7. Thyroid Cartilage. | 15. Upper Constrictor of Pharynx. |
| 8. Epiglottis. | |

FIGS. IX AND X. SAME MUSCLES.

- | | |
|-------------------------------------|--------------------------------|
| 1. Palate Process of Upper Maxilla. | 7. Constrictor Isthmi Faucium. |
| 2. Palate Bone. | 8. Palato-pharyngeus. |
| 3. Pterygoid Process. | 9. Tensor Palati. |
| 4. Hamular Process. | 10. Levator Palati. |
| 5. Velum Palati. | 11. Tonsils. |
| 6. Uvula. | 12. Tongue. |

PLATES XIII AND XIV.

FIGS. I, II AND III. MUSCLES OF TONGUE AND PHARYNX.

- | | |
|--------------------------------|-------------------------------------|
| 1, 2. Zygoma and Malar Bone. | 20. Cricoid Cartilage. |
| 3. Glenoid Tubercle. | 21. Cartilaginous Rings of Trachea. |
| 4. Meatus Auditorius Externus. | a. Orbicularis Oris. |
| 5. Styloid Process. | b. Buccinator. |
| 6. External Pterygoid Plate. | c. Superior Constrictor of Pharynx. |
| 7. Lachrymal Bone. | d. Middle Constrictor. |
| 8. Fossa Lachrymalis. | e. Inferior Constrictor. |
| 9. Upper Maxillary. | f. Mylo-hyoid. |
| 10. Nasal Process. | g. Genio-hyoid. |
| 11. Nasal Bone. | h. Genio-hyo-glossus. |
| 12. Nasal Cartilages. | i. Hyo-glossus—Hyoid Portion. |
| 13. Inferior Maxillary. | k. Hyo-glossus—Posterior Portion. |
| 14. Os Hyoides. | l. Stylo-glossus. |
| 15. Cornua Minor. | m. Stylo-hyoid Ligament. |
| 16. Greater Cornua. | n. Stylo-hyoid Muscle. |
| 17. Thyroid Cartilage. | o. Slit for Digastric. |
| 18. Upper Cornua. | p. Stylo-pharyngeus. |
| 19. Lower Cornua. | |

FIG. IV. LONGITUDINAL SECTION OF NECK AND HEAD.

- | | |
|--------------------------------------|-----------------------------------|
| 1. Frontal Bone. | 19. Epiglottis. |
| 2. Frontal Sinus. | 20. Ventricle. |
| 3. Sphenoid Bone. | 21. Septum of Nose. |
| 4. Sphenoidal Sinus. | 22. Eustachian Tube. |
| 5. Sella Turcica. | 23. Velum Pendulum Palati et |
| 6. Clivus Blumenbachii. | Uvulæ. |
| 7. Basilar Groove. | 24. Tongue. |
| 8. Petrous Portion of Temporal. | a. Lips. |
| 9. Nasal Crest. | b. Cheek. |
| 10. Incisive Canal. | c. Palato-glossus. |
| 11. Palate Process of Upper Maxilla. | d. Tensor Palati. |
| 12. Inferior Maxillary. | e. Levator Palati. [or. |
| 13. Anterior Arch of Atlas. | f. Superior Pharyngeal Constrict- |
| 14. Odontoid Process. | g. Palato-pharyngeus. |
| 15. Cervical Vertebrae. | h. Stylo-pharyngeus. |
| 16. Spinous Processes. | i. Middle Pharyngeal Constrictor. |
| 17. Posterior Arch of Atlas. | k. Genio-glossus. |
| 18. Os Hyoides. | l. Genio-hyoid. |

PLATE XIII.

FIG. V. EPITHELIAL CELLS (PAVEMENT).

FIG. VI. PORTION OF A RACEMOSE GLAND.

PLATE XIV.

FIGS. V-VIII. HYOID BONE.

- | | | |
|----------|------------------|-------------------|
| 1. Body. | 2. Lesser Cornu. | 3. Greater Cornu. |
|----------|------------------|-------------------|

PLATE XV.

MUSCLES OF THE PERINEUM.

FIG. I. MALE PERINEUM.

FIG. II. FEMALE PERINEUM.

- | | |
|-------------------------------------|------------------------------|
| 1. Coccyx. | 12. Urethra. |
| 2. Tuberosity of Ischium. | 13. Coccygeus Muscle. |
| 3. Pubes. | 14. Obturator Internus. |
| 4. Gluteus Magnus. | 15. Levator Ani. |
| 5. Suspensory Ligament of Clitoris. | 16. External Sphincter. |
| 6. Clitoris. | 17. Internal Sphincter. |
| 7. Labia Minora. | 18. Sphincter Vaginæ. |
| 8. Perineum. | 19. Erector Penis. |
| 9. Anus. | 20. 21. Transversus Perinei. |
| 10. Corpus Cavernosum of Clitoris. | 22. Bulb of Urethra. |
| 11. Corpus Cavernosum of Penis. | |

FIGS. III TO XI. SEPARATE MUSCLES OF THE PERINEUM.

FIG. V.

FIGS. X AND XI.

- | | |
|-------------------------|------------------|
| 23. Muscles of Bladder. | 17. Levator Ani. |
|-------------------------|------------------|

PLATES XVI AND XVII.

FIG. I. HYOID AND LARYNGEAL MUSCLES.

- | | |
|-------------------------------------|--|
| 1. Chin. | 20. Coraco-acromial Ligament. |
| 2. Angle of Lower Jaw. | 21. Anterior Sterno-clavicular Ligament. |
| 3. Mastoid Process. | 22. Rhomboid Ligament. |
| 4. Body of Hyoid Bone. | 23. Omo-hyoid Muscle. |
| 5. Its Greater Cornua. | 24. Scalenus Anticus. |
| 6. Lesser Cornua. | 25. Scalenus Medius. |
| 7. Thyro-hyoid Ligament. | 26. Scalenus Posticus. |
| 8. Thyroid Cartilage. | 27. Sterno-thyroid. |
| 9. Cricoid Cartilage. | 28. Sterno-hyoid. |
| 10. Thyroid Gland. | 29. Thyro-hyoid. |
| 11. Trachea. | 30. Levator Anguli Scapulæ. |
| 12. Clavicle. | 31. Rectus Capitis Anticus Major. |
| 13. Sternum. | 32. Splenius Capitis. |
| 14. Ribs. | 33. Digastricus. |
| 15. Coracoid Process. | 34. Stylo-hyoid. |
| 16. Acromion. | 35. Mylo-hyoid. |
| 17. Glenoid Cavity. | 36. Hyo-glossus. |
| 18. Sub-scapular Fossa. | 37. Genio-hyoid. |
| 19. Transverse Ligament of Scapula. | |

FIGS. II TO XII. MUSCLES OF LARYNX.

- | | |
|-----------------------------------|-----------------------------------|
| 1. Body of Hyoid Bone. | 11. Epiglottis. |
| 2. Greater Cornua. | 12. Thyro-hyoid Muscle. |
| 3. Lesser Cornua. | 13. Crico-thyroid. |
| 4. Thyroid Cartilage. | 14. Crico-arytænoideus Posticus. |
| 5. Upper Cornua. | 15. Crico-arytænoideus Lateralis. |
| 6. Lower Cornua. | 16. Thyro-arytænoideus Inferior. |
| 7. Cricoid Cartilage. Front View. | 17. Thyro-arytænoideus Superior. |
| 8. Cricoid Cartilage. Back View. | 18. Thyro-epiglottideus. |
| 9. Arytenoid Cartilages. | 19. Arytæno-epiglottideus. |
| 10. Cornicula Laryngis. | 20. Arytænoideus. |



Part 3.

Descriptive Anatomy

OF THE

HUMAN BODY,

FORMING

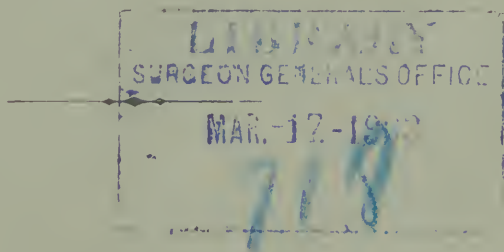
A TEXT BOOK

TO THE

ATLAS OF HUMAN ANATOMY.

BY

J. A. JEANCON, M. D.



CINCINNATI:

A. E. WILDE & CO., PUBLISHERS,

1880.

JOHN BEACHAM,
12 DEY STREET,
New-York.

ANGIOLOGY.

PLATES I AND II.

THE HEART ENCLOSED IN THE PERICARDIUM. NORMAL POSITION.

FIG. I. ANTERIOR ASPECT.

1. Diaphragm.
2. Œsophageal Opening.
3. Œsophagus.
4. Opening for Vena Cava.
5. Inferior Vena Cava.
6. Pericardium.
7. Pulmonary Veins.
8. Pulmonary Artery.

FIG. II. POSTERIOR ASPECT.

9. Arch of Aorta.
10. Innominate Artery.
11. Left Common Carotid.
12. Left Subclavian.
13. Superior Vena Cava.
14. Right Innominate Vein.
15. Left Innominate Vein.

FIG. III. SECTION OF ABDOMINAL AORTA, SHOWING ITS COATS.

1. External or Areolar Elastic Coat.
2. Middle or Muscular Coat.
3. Internal or Epithelial Coat.

FIG. IV. SECTION OF A VEIN.

1. Part not opened.
2. Opened Portion.
3. Valves.
4. Openings of Branches.

FIG. V. VALVES OF THE VEINS, SHOWING THEM TO BE REFLECTIONS OF THE INTERNAL COAT OF THE VEINS.

FIG. VI. BLOOD CORPUSCLES.

1. Fresh Blood Corpuscles.
2. Side view of same. [Blood.
3. Position of Corpuscles in the
- 4, 6. Corpuscles changed by exposure to the atmosphere.

PLATES III AND IV.

THE CAVITIES OF THE HEART.

FIG. I. POSTERIOR ASPECT.

- a. Left Ventricle.
- b. Right Ventricle.
- c. Apex of Heart.
- d. Right Auricle.
- e. Left Auricle.
1. Arch of the Aorta.
2. Innominate Artery.
3. Left Common Carotid.
4. Left Subclavian.
5. Pulmonary Artery.

- | | |
|---------------------------|--|
| 6. Superior Vena Cava. | 16. Opening of the Pulmonary Arteries. |
| 7. Inferior Vena Cava. | 17. Septum Ventriculorum. |
| 8. Pulmonary Vein. | 18. Septum Auricularum. |
| 9. Right Auricle. | 19. Annulus Ovalis. |
| 10. Eustachian Valve. | 20. |
| 11. Upper Cornua of same. | 21. Cavity of Left Auricle. |
| 12. Fossa Ovalis. | 22. Appendix Auriculæ. |
| 13. Tricuspid Valve. | 23. Openings of Pulmonary Veins. |
| 14. Musculi Papillares. | 24. Mitral Valve. |
| 15. Columnæ Carneæ. | |

FIG. II. ANTERIOR ASPECT OF SAME.

- | | |
|-------------------------|---|
| a. Right Ventricle. | 6. Left branch of Pulmonary Artery. |
| b. Left Ventricle. | 7. Semilunar Valves. |
| c. Left Auricle. | 8. Corpora Arantii. |
| 1. Arch of the Aorta. | 9. Tricuspid Valves. |
| 2. Innominate Artery. | 10. Right Auriculo-ventricular Opening. |
| 3. Left Common Carotid. | 11. Columnæ Carneæ. |
| 4. Left Subclavian. | |
| 5. Arteria Pulmonalis. | |

FIG. III. LEFT VENTRICLE AND AORTA.

- | | |
|-------------------------|--------------------------------------|
| a. Left Ventricle. | 7. Inferior Vena Cava. |
| b. Apex of Heart. | 8. Orifice of Right Coronary Artery. |
| c. Right Ventricle. | 9. Opening of Left Coronary Artery. |
| d. Appendix Auriculæ. | 10. Semilunar Valves. |
| 1. Arch of Aorta. | 11. Corpora Arantii. |
| 2. Innominate Artery. | 12. Sinuses of Valsalva. |
| 3. Left Common Carotid. | 13. Mitral Valves. |
| 4. Left Subclavian. | 14. Chordæ Tendineæ. |
| 5. Superior Vena Cava. | 15. Columnæ Carneæ. |
| 6. Pulmonary Artery. | |

PLATES V AND VI.

ARTERIES OF THE HEAD, NECK, AND UPPER PART OF THE THORAX.

- | | |
|---------------------------|-------------------------------------|
| a. Zygomaticus Major. | l. Stylo-glossus. |
| b. Depressor Anguli Oris. | m. Sublingual Glands. |
| c. Buccinator. | n. Mylo-hyoid. |
| d. Masseter. | o. Hyo-glossus. |
| e. Steno's Duct. | p. Omo-hyoid. |
| f. Retrahens Aurem. | q. Sterno-hyoid. |
| g. Pinna. | r. Thyroid Cartilage. |
| h. Sterno-cleido Mastoid. | s. Thyro-hyoid. |
| i. Digastric. | t. Inferior Pharyngeal Constrictor. |
| k. Styloid Process. | u. Rectus Capitis Anticus Major. |

- v.* Thyroid Gland.
- w.* Trachea.
- x.* Sterno-thyroid.
- y.* Sterno-hyoid.
- z.* Scalenus Anticus.
- a.* Scalenus Medius.
- β.* Scalenus Posticus.
- γ.* Levator Anguli Scapulæ.
- δ.* Splenius Capitis.
- ε.* Trapezius.
- ζ.* Deltoid.
- η.* Clavicle.
- θ.* Pectoralis Major.
- ι.* Subclavius.
- κ.* Ribs.
- λ.* Pectoralis Minor.
- μ.* Intercostales.
- ν.* Rectus Abdominalis.
- ξ.* Serratus Anticus Major.
- ο.* Latissimus Dorsi.
- π.* Teres Major.
- ρ.* Subscapularis.
- σ.* Coraco-brachialis.
- ν.* Biceps.
- υ.* Long Head of Triceps.
- O.* Lymphatic Glands.
 - 1. Right Common Carotid Artery.
 - 2. Internal Carotid Artery.
 - 3. External Carotid Artery.
 - 4. Superior Thyroid.
 - 5. Superior Laryngeal.
 - 6. Branch to Sterno-hyoid.
 - 7. Thyroid Branch.
 - 8. Lingual Artery.
 - 9. Hyoid Branch.
- 10. Branch of Sterno-mastoid.
- 11. Facial.
- 12. Ascending Palatine.
- 13. Tonsillar Branch.
- 14. Submental.
- 15. Branch to Masseter.
- 16. Buccinator Branch.
- 17. Superficial Labial.
- 18. Inferior Coronary.
- 19. Superior Coronary.
- 20. Ascending Pharyngeal Branch.
- 21. Occipital.
- 22. Stylo-mastoid Branch.
- 23. Posterior Auricular.
- 24. Branches to Parotid Gland.
- 25. Transverse Facial.
- 26. Muscular Branch.
- 26. Superficial Temporal.
- 28. Internal Maxillary.
- 29. Inferior Maxillary Branch.
- 30. Subclavian Artery.
- 31. Internal Mammary.
- 32. External Branch.
- 33. Inferior Thyroid.
- 34. Branch to Trachea.
- 35. Thyroid Branch.
- 36. Inferior Laryngeal.
- 37. Branch to Longus Colli.
- 38. Supra-scapular.
- 39. Superficial Cervical.
- 40. Cervicalis Ascendens.
- 41. Vertebral.
- 42. Transversalis Colli.
- 43. Branch to Trapezius Muscle.
- 44. Axillary Artery.
- 45. Branch to Serratus Anticus.
- 46. Superior Thoracic.
- 47. Branch to Pectoralis Minor.
- 48. Branch to Pectoralis Major.
- 49. Branch to Serratus Anticus.
- 50. Acromial Thoracic.
- 51. Clavicular Branch.
- 52. Acromial Branch.
- 53. Deltoid Branch.
- 54. Branch to Pectoralis Major.
- 55. Thoracica Longa.
- 56. Branch to Pectoralis Minor.
- 57. Branch to Serratus Magnus.
- 58. Anastomosis with Subscapular.
- 59. Subscapular Artery.
- 60. Subscapular Branch.
- 61. Thoracic Branch.
- 62. Branch to Axillary Lymphatics.
- 63. Branch to Latissimus Dorsi.
- 64. Branch to Serratus Magnus.
- 65. Circumflex Scapulæ.
- 66. Branch to Teres Major.

- | | |
|------------------------------------|----------------------------------|
| 67. Muscular Branch. | 73. Brachial Artery. |
| 68. Branch to Axillary Lymphatics. | 74. Branch to Coraco-brachialis. |
| 69. Branch to Latissimus Dorsi. | 75. Branch to Anconeus. |
| 70. Branch to Coraco-brachialis. | 76. Cutaneous Branch. |
| 71. Anterior Circumflex. | 77. Branch to Biceps. |
| 72. Posterior Circumflex. | 78. Profunda Superior. |

PLATES VII AND VIII.

ARTERIES OF THE FACE.

- | | |
|--|--|
| <i>a, b, c.</i> Occipito-frontalis Muscle. | 5. Trapezius. |
| <i>d.</i> Attolens Aurem. | <i>o.</i> Splenius Capitis. |
| <i>e.</i> Orbicularis Palpebrarum. | 1. Common Carotid Artery. |
| <i>f.</i> Zygomaticus Major. | 2. Internal Carotid Artery. |
| <i>g.</i> Zygomaticus Minor. | 3. External Carotid Artery. |
| <i>h.</i> Levator Anguli Oris. | 4. Superior Thyroid. |
| <i>i.</i> Levator Labii Superioris. | 5. Internal Laryngeal. |
| <i>k.</i> Levator Labii Superioris Alaque
Nasi. | 6. Superficial Laryngeal. |
| <i>l.</i> Compressor Narium. | 7. Muscular Branches. |
| <i>m.</i> Orbicularis Oris. | 8. Thyroid Branch. |
| <i>n.</i> Quadratus Menti. | 9. Tracheal Branches of Inferior
Thyroid. |
| <i>o.</i> Depressor Anguli Oris. | 10. Branch to Sterno-cleido-mastoid. |
| <i>p.</i> Buccinator. | 11. Ascending Pharyngeal. |
| <i>q.</i> Inferior Maxillary Bone. | 12. Lingual Artery. |
| <i>r.</i> Masseter. | 13. Hyoid Branch. |
| <i>s.</i> Parotid Gland. | 14. Facial. |
| <i>t.</i> Steno's Duct. | 15. Branch to Sub-maxillary Gland. |
| <i>u.</i> Temporal Muscle. | 16. Submental. |
| <i>v.</i> Sub-maxillary Gland. | 17. Masseteric Branch. |
| <i>w.</i> Digastric Muscle. | 18. Superficial Labial. |
| <i>x.</i> Stylo-hyoid Muscle. | 19. Inferior Coronary. |
| <i>y.</i> Thyroid Cartilage. | 20, 21, 22. Muscular Branches. |
| <i>z.</i> Trachea. | 23. Inferior Coronary. |
| <i>a.</i> Sterno-hyoid. | 24. Facial. |
| <i>γ.</i> Thyro-hyoid. | 25. Superior Coronary. |
| <i>δ.</i> Os Hyoides. | 26. Lateralis Nasi. |
| <i>ε.</i> Omo-hyoid. | 27. Branch to the Septum of the
Nose. |
| <i>ζ.</i> Inferior Pharyngeal Constrictor. | 28. Dorsalis Nasi. |
| <i>η.</i> Thyroid Gland. | 29. External Carotid. |
| <i>θ.</i> Sterno-cleido-mastoid. | 30. Occipital. |
| <i>ι.</i> Scalenus Anticus. | 31. Branch to Splenius Capitis. |
| <i>κ.</i> Inferior Cervical Nerve. | 32. Cervical Branches. |
| <i>λ.</i> Scalenus Medius. | 33. Superficial Branches. [tery. |
| <i>μ.</i> Scalenus Posticus. | 34. Anastomoses with Temporal Ar- |
| <i>ν.</i> Levator Anguli Scapulæ. | |

- | | |
|--|-------------------------------------|
| 35. Superior Auricular Branch to Sterno-mastoid. | 44. Anastomoses with Occipital. |
| 36. Transverse Facial. | 45. Dorsalis Nasi, from Ophthalmic. |
| 37. Muscular Branches. | 46. Infra-orbital. |
| 38. Temporal Artery. | 47. Frontal. |
| 39. Anterior Auricular. | 48. Internal Mammary. |
| 40. Anterior Temporal. | 49. Supra-scapular. |
| 41. Middle Temporal. [tery. | 50. Superficial Cervical. |
| 42. Anastomoses with Frontal Ar- | 51. Cervicalis Ascendens. |
| 43. Posterior Temporal. | 52. Transversalis Colli. |
| | 53. Subclavian Artery. |

PLATES IX AND X.

DEEP BRANCHES OF EXTERNAL CAROTID.

FIG I.

- | | |
|--|--------------------------------|
| a. Section of Cranial Bones. | 7. Transverse Facial. |
| b. Dura Mater. | 8. Superficial Temporal. |
| c. Orbicularis Palpebrarum. | 9. Anterior Temporal. |
| d. Levator Labii Superioris Alæque Nasi. | 10. Posterior Temporal. |
| e. Compressor Narum. | 11. Internal Maxillary. |
| f. Levator Anguli Oris. | 12. Pterygoid Branch. |
| g. Levator Labii Superioris. | 13. Middle Meningeal. |
| h. Zygomaticus Minor. | 14. Tympanic Branch. |
| i. Zygomaticus Major. | 15. Inferior Maxillary Branch. |
| k. Quadratus Menti. | 16. Deep Temporal. |
| l. Depressor Anguli Oris. | 17. Pterygoid Branch. |
| m. Lower Jaw. | 18. Deep Temporal. |
| n. Masseter. | 19. Buccal Branch. |
| o. Buccinator. | 20. Masseteric Branch. |
| p. Steno's Duct. | 21. Descending Palatine. |
| q. Inferior Maxillary Branch. | 22. Superior Maxillary Branch. |
| r. Styloid Process. | 23. Infra-orbital. |
| s. Internal Pterygoid | 24. Posterior Nasal. |
| t. External Pterygoid. | 25. Frontal. |
| u. Temporal Muscle. | 26. Muscular Branch. |
| v. Zygomatic Process of Malar Bone. | 27. Dorsalis Nasi. |
| w. Zygomatic Process of Temporal. | 28. Superficial Labial. |
| 1. Internal Carotid Artery. | 29. Masseteric Branch. |
| 2. External Carotid " | 30. Inferior Coronary. |
| 3. Masseteric Branch " | 31. Mental Branch. |
| 4. Posterior Auricular " | 32. Labial. |
| 5. Deep Auricular " | 33. Superior Coronary. |
| 6. Parotid Branch " | 34. Lateralis Nasi. |
| | 35. Artery of Septum. |

FIGS. II AND III. ARTERIES OF NOSE AND TONGUE.

- | | |
|--|--|
| <i>a.</i> Frontal Bone. | <i>γ.</i> Genio-hyoid. |
| <i>b.</i> Crista Galli. | <i>z.</i> Sterno-hyoid. |
| <i>c.</i> Body of Sphenoid Bone. | <i>α.</i> Omo-hyoid. |
| <i>d.</i> Sella Turcica. | <i>β.</i> Hyoid Bone. |
| <i>e.</i> Posterior Clinoid Process. | <i>γ.</i> Thyro-hyoid. |
| <i>f.</i> Sphenoidal Sinus. | <i>δ.</i> Mylo-hyoid. |
| <i>g.</i> Basilar Groove. | <i>ε.</i> Superior Pharyngeal Constrictor. |
| <i>h.</i> Eustachian Tube. | <i>ζ.</i> Thyroid Cartilage. |
| <i>i.</i> Mucous Follicles. | 1. Common Carotid Artery. |
| <i>k.</i> Section of Nasal Bones and Cartilages. | 2. Internal Carotid “ |
| <i>l.</i> Upper Maxillary. | 3. Superior Thyroid “ |
| <i>m.</i> Palate Bone. | 4. Superior Laryngeal “ |
| <i>n.</i> Velum Pendulum Palati. | 5. Lingual “ |
| <i>o.</i> Upper Lip. | 6. Hyoid “ |
| <i>p.</i> Space between Upper Lip and Gums. | 7. Dorsalis Linguae “ |
| <i>q.</i> Alveolar Process. | 8. Sub-lingual “ |
| <i>r.</i> Tongue. | 9. Ranine “ |
| <i>s.</i> Stylo-glossus. | 10. Labial “ |
| <i>t.</i> Lower Lip. [Gums. | 11. External Carotid “ |
| <i>u.</i> Space between Lower Lip and | 12. Descending Palatine “ |
| <i>v.</i> Lower Jaw Bone. | 13. Alveolar Branches. |
| <i>w.</i> Genio-glossus. | 14. Branches to Septum from Posterior Nasal. |
| <i>x.</i> Hyo-glossus. | 15. Incisive Branch. [thalmic. |
| | 16. Ethmoidal Branches of Oph- |

FIG. III.

- | | |
|--|--|
| <i>a</i> to <i>q.</i> Same as in previous figures. | 5. Branch of Posterior Nasal. |
| <i>r.</i> Superior } Turbinated Bones. | 6. Branch to Superior Turbinated Bone. |
| <i>s.</i> Middle } | 7. Same to Middle Turbinated Bone. |
| <i>t.</i> Inferior } | 8. Same to Inferior Turbinated Bone. |
| 1. Ethmoidal Artery. | 9. Branch to Eustachian Tube. |
| 2. Its continuation to the Alæ Nasi. | 10. Branch to Soft Palate. |
| 3. Branches to Inferior Turbinated Bone. | |
| 4. To Middle Turbinated Bone. | |

PLATES XI AND XII.

FIG. I. THE VERTEBRAL ARTERY.

- | | |
|---|--|
| <i>a.</i> Posterior Arch of Atlas. | <i>d.</i> Transverse Processes of Cervical |
| <i>b.</i> Transverse Process of Atlas. | Vertebræ. |
| <i>c.</i> Spinous Processes of Cervical | <i>e.</i> First Rib. |
| Vertebræ. | <i>f.</i> Scalenus Anticus. |

<i>g.</i> Scalenus Posticus	} Muscles.	7. Thyroid Axis.
<i>h. i.</i> Sterno-cleido Mastoid		8. Vertebral Artery. [Axis.
<i>k.</i> Longus Colli		9. Its course between the Atlas and
<i>l.</i> Semi-spinalis Cervicis		10. Its continuation to the Occipital
<i>m.</i> Obliquus Inferior		Bone.
<i>n, o.</i> Rectus Capitis Posticus Major		11. Branches to Longus Colli.
1. Innominate Artery. [Muscle.		12. Deep Branches.
2. Common Carotid.		13. Muscular Branch.
3. Subclavian.		14, 15. Superior Intercostal.
4. Internal Mammary.		16. Deep Cervical.
5. Inferior Thyroid.		17. Transversalis Colli.
6. Thyroid Branch.		18. Subclavian Artery.

FIG. II. ARTERIES OF THE BRAIN.

<i>a, a.</i> Anterior Lobes.	} Nerves.	<i>t.</i> Glosso-pharyngeus Muscle.
<i>b.</i> Fissure of Sylvius.		<i>u.</i> Pneumogastric Muscle.
<i>c, c.</i> Middle Lobes.		<i>v.</i> Hypo-glossal Muscle
<i>d, d.</i> Posterior Lobes.		1. Vertebral Artery.
<i>e.</i> Cerebellum.		2. Posterior Cerebellar.
<i>f.</i> Medulla Oblongata.		3. Basilar.
<i>g.</i> Pons Varollii.		4. Anterior Spinal.
<i>h.</i> Peduncles.		5. Branch to Spinal Cord.
<i>i.</i> Tuber Cincereum.		6. Anterior Cerebellar. [Nerve.
<i>k.</i> Infundibulum.		7. Branch to Pons Varolii and fifth
<i>l.</i> Olfactory		8. Superior Cerebellar.
<i>m.</i> Optic		9. Posterior Cerebral.
<i>n.</i> Motor Oculi		10. Posterior communicating.
<i>o.</i> Trochlearis		11. Internal Carotid.
<i>p.</i> Trigemini		12. Middle Cerebral.
<i>q.</i> Abducens		13. Anterior communicating.
<i>r.</i> Facial		14. Anterior Cerebral.
<i>s.</i> Auditory		15. Branches of Middle Cerebral.

FIG. III. ARTERIES OF THE ARM.

<i>a.</i> Deltoid	} Muscles.	<i>n.</i> Supinator Longus	} Muscles.
<i>b.</i> Pectoralis Major		<i>o.</i> Pronator Radii Teres	
<i>c.</i> Latissimus Dorsi		<i>p.</i> Flexor Carpi Radialis	
<i>d.</i> Teres Major		<i>q.</i> Palmaris Longus	
<i>e.</i> Teres Minor		<i>r.</i> Flexor Carpi Ulnaris	
<i>f.</i> Triceps		1. Brachial Artery.	
<i>g.</i> Subanconeus		2. Branch to Triceps.	
<i>h.</i> Coraco-brachialis		3. Superior Profunda.	
<i>i.</i> Biceps		4. Muscular Branches.	
<i>k.</i> Bicipital Fascia.		5. Anterior Ulnar Recurrent.	
<i>l.</i> Tendon of Biceps.		6. Muscular Branch to Biceps.	
<i>m.</i> Brachialis Anticus Muscle.		7. Branch to Triceps.	

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|-----------------------------------|-----------------------|
| 8. Muscular Branches. | 11. Ulnar. |
| 9. Deep Ulnar Recurrent. | 12. Radial. |
| 10. Branch to Brachialis Anticus. | 13. Radial Recurrent. |

PLATES XIII AND XIV.

ARTERIES OF THE FOREARM AND HAND.

FIG. I.

- | | |
|------------------------------------|--------------------------------------|
| a. Biceps Muscle. | 3. Branch to Brachialis Anticus. |
| b. Its Tendons. | 4. Branch to Pronator Teres. |
| c. Brachialis Anticus Muscle. | 5. Radial Recurrent. |
| d. Internal Inter-muscular Septum. | 6. Radial Artery. |
| e. Subanconeus. | 7. Muscular Branches. |
| f. Internal Condyle. | 9. Superficialis Volæ. |
| g. Pronator Radii Teres | 10. Branches to the Muscles of the |
| h. Supinator Longus | Thumb. |
| i. Supinator Brevis [oir | 11. Radial. |
| k. Extensor Carpi Radialis Long- | 12. Muscular Branches. |
| l. Extensor Longus Pollicis | 13. Ulnar Artery. |
| m. Extensor Brevis Pollicis | 14. Branches to the Flexor Muscles. |
| n. Palmaris Longus | 15. Branch to Palmaris Brevis. |
| o. Palmar Fascia | 16. Ulnar Artery forming Superficial |
| p. Flexor Carpi Radialis | Palmar Arch. |
| q. Flexor Carpi Ulnaris | 17. Deep Branch of Ulnar Artery. |
| r. Flexor Sublimis Digitorum | 18. Palmar Digital Branch to Little |
| s. Its Four Tendons | Finger. |
| t. Flexor Profundus Digitorum | 19. Palmar Digital Branch to Ring |
| u. Its Tendons | Finger. |
| v. Palmaris Brevis | 20. Third Digital Branch. |
| w. Anterior Annular Ligament | 21. Fourth Digital Branch. |
| x. Opponens Pollicis | 22. Cutaneous Branch. |
| y. Abductor Pollicis | 23. Bifurcation of Digital Branches. |
| z. Flexor Brevis Pollicis | 24, 28. Digital Branches of Ulnar |
| a. Adductor Pollicis | Artery. |
| β. Interossei | 25. 29. Digital Branches of Radial |
| γ. Flexor Brevis Minimi Digiti | Artery. |
| δ. Abductor Minimi Digiti | 30. Branches to Dorsum of Fingers. |
| 1. Brachial Artery. | 31. Arch formed at last Phalanx by |
| 2. Deep Ulnar Recurrent. | Digital Branches. |

MUSCLES.

FIG. II. DEEP ARTERIES OF FOREARM AND HAND.

- | | |
|------------------------------------|------------------------------------|
| a. Subanconeus Muscle. | c. Extensor Carpi Radialis Muscle. |
| b. Internal Inter-muscular Septum. | f. Tendon of Biceps. |
| c. Brachialis Anticus Muscle. | g. Supinator Brevis Muscle. |
| d. Pronator Radii Teres Muscle. | h. Flexor Carpi Radialis Longior. |

- | | |
|---|--|
| <p><i>i.</i> Flexor Carpi Radialis Brevior.
 <i>k.</i> Tendon of Supinator Longus.
 <i>m.</i> Flexor Longus Pollicis.
 <i>n.</i> Pronator Quadratus.
 <i>o.</i> Interosseous Ligament.
 <i>p.</i> Tendon of Triceps.
 <i>q.</i> Tendon of Flexor Carpi Ulnaris.
 <i>r.</i> Anterior Annular Ligament.
 <i>s. v.</i> Interossei.
 <i>w.</i> Adductor Minimi Digiti Muscle.
 <i>x.</i> Abductor Minimi Digiti “</p> <ol style="list-style-type: none"> 1. Brachial Artery. 2. Posterior Ulnar Recurrent. 3. Branch to Brachialis Anticus. 4. Radial Artery. 5. Radial Recurrent. 6. Branch to Capsular Ligament. 7. Ulnar Artery. 8. Anterior Ulnar Recurrent. 9. Branches to the Flexor Muscles. 10. Branch to Pronator Quadratus. 11. Branch to Palmar Arch. 12. Superficialis Volæ. 13. Radial Artery. 14. Interosseous Arteries. 15. Perforating Branch. | <ol style="list-style-type: none"> 16. Interosseous Artery passing behind Interosseous Membrane. 17. Branches of Ulnar to Rete Carpi Volare. 18. Ulnar forming Superficial Palmar Arch. 19. Deep Palmar Arch. 20. Princeps Pollicis. 21. Its External Branch. 22. Its Internal Branch. [es. 23, 24. Anastomoses of these Branch- 25. Radialis Indicis. 26. Palmar Interosseous. 27. Perforating Branches. 28. Anastomoses with Digital Branches. 29. Digital Branch to little Finger. 30. Digital Palmar Branches. 31, 33, 35. Ulnar Digital Branches. 32, 34, 36. Radial Digital Branches. 37. Their Anastomoses on the first Phalanx. 38. Their Anastomoses on the second Phalanx. 39. Their Anastomoses on the Ungual Phalanx. |
|---|--|

FIG. III. FOREARM AND HAND. DORSAL ASPECT.

- | | |
|--|---|
| <p><i>a.</i> Radius.
 <i>b.</i> Ulna.
 <i>c.</i> Interosseous Ligament.
 <i>d.</i> Posterior Carpal Ligament.
 <i>e.</i> Dorsal Interossei.
 <i>f.</i> Adductor Pollicis.
 <i>g.</i> Extensor Longus Pollicis.
 <i>h.</i> Tendons of Extensor Communis Digitorum.</p> <ol style="list-style-type: none"> 1. Posterior Interosseous Artery. 2. Branches to Rete Carpi Dorsale. 3. Dorsal Branch of Radial. | <ol style="list-style-type: none"> 4. Branches to Dorsal Surface of Carpus. 5. Dorsalis Pollicis—Radial Side. 6. Same—Ulnar Side. 7, 12, 14, 16. Radial, Dorsal, Digital Branches. 8. Ulnar, Dorsal, Carpal Branch. 9. Perforantes. 10. Dorsal Interosseous. 11, 13, 15, 17. Ulnar, Dorsal, Digital Branches. |
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PLATES XV AND XVI.

ARTERIES OF THE THORAX. BACK VIEW OF SECTION OF SAME.

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|--|--|
| <p><i>a.</i> Frontal Bone.
 <i>b.</i> Frontal Ridge.</p> | <p><i>c.</i> Ethmoidal Bone.
 <i>d.</i> Olfactory Nerve.</p> |
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|---|------------------------------|
| <i>e.</i> Sella Turcica. | <i>8.</i> Liver. |
| <i>f.</i> Optic Nerve. | 1. Thoracic Aorta. |
| <i>g, g.</i> Lesser Wings of Sphenoid Bone. | 2. Left Subclavian. |
| <i>h, h.</i> Greater Wings of Sphenoid Bone. | 3. Vertebral. |
| <i>i.</i> Petrous Portion of Temporal. | 4. Basilar. |
| <i>k.</i> Motor Oculi Nerve. | 5. Anterior Spinal. |
| <i>l.</i> Trochlearis “ | 6. Posterior Cerebellar. |
| <i>m.</i> Trifacial “ | 7. Auditory Branch. |
| <i>n.</i> Abducens “ | 8. Superior Cerebellar. |
| <i>o.</i> Petrous Portion of Temporal Bone. | 9. Posterior Cerebral. |
| <i>p.</i> Facial Nerve. | 10. Posterior communicating. |
| <i>q.</i> Auditory Nerve. | 11. Internal Carotid. |
| <i>r.</i> Glosso-pharyngeus Nerve. | 12. Middle Cerebral. |
| <i>s.</i> Pneumogastric “ | 13. Anterior communicating. |
| <i>t.</i> Nervus Accessorius Willisi. | 14. Anterior Cerebral. |
| <i>u.</i> Hypo-glossal. | 15. Inferior Thyroid. |
| <i>U</i> Spinal Cord. | 16. Common Carotid. |
| <i>v.</i> Posterior Roots of Cervical Nerves. | 17. Superior Intercostal. |
| <i>w.</i> Their Ganglia. | 18. Aortic Intercostals. |
| <i>x.</i> Phrenic Nerve. | 19. Abdominal Aorta. |
| <i>y.</i> Brachial Plexus. | 20. Lumbar Arteries. |
| <i>z.</i> Atlas. | 22. Renal Arteries. |
| <i>a.</i> Ribs. | 22. Iliac Arteries. |
| <i>β.</i> Intercostal Muscles. | 23. Inferior Vena Cava. |
| <i>γ.</i> Lungs. | 24. Renal Veins. |
| <i>δ.</i> Œsophagus. | 25. Intercostal Veins. |
| <i>ε.</i> Diaphragm. | 26. Vena Azygos Major. |
| <i>ζ.</i> Kidneys. | 27. Vena Azygos Minor. |
| <i>η.</i> Ureters. | 28. Thoracic Duct. |

PLATES XVII AND XVIII.

ARTERIES OF THE HEAD AND NECK. POSTERIOR ASPECT.

- | | |
|---|--------------------------------------|
| <i>a.</i> Frontal Bone. | <i>o.</i> Velum Pendulum Palati. |
| <i>b.</i> Eye. | <i>p.</i> Uvula. |
| <i>c.</i> Lachrymal Gland. | <i>q.</i> External Pterygoid Muscle. |
| <i>d.</i> Rectus Inferior Muscle. | <i>r.</i> Parotid Gland. |
| <i>e, g.</i> Optic Nerve. | <i>s.</i> Internal Pterygoid Muscle. |
| <i>f.</i> Optic Commisure. | <i>t.</i> Levator Palati. |
| <i>h.</i> Petrous portion of Temporal Bone. | <i>u.</i> Palato-pharyngeus. |
| <i>i.</i> Trifacial Nerve. | <i>v.</i> Temporal Muscle. |
| <i>k.</i> Trochlearis. | <i>w.</i> Masseter. |
| <i>l.</i> Facial Nerve. | <i>x.</i> Inferior Maxillary Bone. |
| <i>m.</i> Auditory Nerve. | <i>y.</i> Tongue. |
| <i>n.</i> Posterior Nares. | <i>z.</i> Epiglottis. |

- | | |
|---|---|
| <ul style="list-style-type: none"> <i>a.</i> Arytæmoid Cartilages. <i>β.</i> Greater Cornua of Hyoid Bone. <i>γ.</i> Arytænoideus Muscle. <i>δ.</i> Cricoid Cartilage. <i>ε.</i> Thyroid Cartilage. <i>ζ.</i> Trachea. <i>η.</i> Thyroid Gland. <i>θ.</i> Bronchi. <i>ι.</i> Lungs. <i>κ.</i> Left Auricle. <i>λ.</i> Left Ventricle. <ul style="list-style-type: none"> 1. Ascending Aorta. 2. Arch of Aorta. 3. Innominate Artery. 4. Right Common Carotid. 5. External Carotid. 6. Internal Carotid. 7. Ophthalmic. 8. Middle Cerebral. 9. Anterior communicating. 8, 9, 16, 17. Circle of Willis. 10. Anterior Cerebral. | <ul style="list-style-type: none"> 11. Left Common Carotid. 12. Right Subclavian. 13. Left Subclavian. 14. Vertebral 15. Basilar. 16. Posterior Cerebral. 17. Posterior communicating. 18. Inferior Thyroid. 19. Cervicalis Ascendens. 20. Superficial Cervical. 21. External Carotid. 22, 23. Muscular Branches. 24. Internal Maxillary. 25. Pulmonary Artery. 26. Pulmonary Branches. 27. Pulmonary Veins. 28. Internal Jugular Vein. 29. Superior Vena Cava. 30. Inferior Vena Cava. 31. Coronary Veins. 32. Coronary Arteries. |
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PLATES XIX AND XX.

ABDOMINAL AORTA AND BRANCHES.

- | | |
|--|--|
| <ul style="list-style-type: none"> <i>a.</i> Xyphoid Cartilage. <i>b, c.</i> Cartilages of Seventh and Eight Ribs. <i>d.</i> Costo-xyphoid Ligament. <i>e.</i> Crura of Diaphragm. <i>f.</i> Their Junction. <i>g, h.</i> Central Tendon of Diaphragm. <i>i.</i> Opening for Vena Cava. <i>k.</i> Inferior Vena Cava. <i>l.</i> Œsophageal Opening. <i>m.</i> Œsophagus. <i>n.</i> Psoas Magnus. <i>o.</i> Psoas Parvus. <i>p.</i> Quadratus Lumborum. <i>q.</i> Transversalis Abdominis. <i>r.</i> Rectus Abdominis. <i>s.</i> Iliacus. <i>t.</i> Kidney. <i>u.</i> Supra-renal Capsule. <i>v.</i> Pelvis of Kidney. | <ul style="list-style-type: none"> <i>w.</i> Ureter. <i>x.</i> Bladder. <i>y.</i> Urachus. <i>z.</i> Rectum. <i>a.</i> Vas Deferens. <i>β.</i> Internal Inguinal Ring. <i>γ.</i> Sacrum. <i>δ.</i> Last Lumbar Vertebra. <i>ε.</i> Spinal Column. <i>ζ.</i> Ilium. <ul style="list-style-type: none"> 1. Abdominal Aorta. 2. Coeliac Axis. 3. Inferior Phrenic. 4. Left Phrenic. 5. Branch to the Diaphragm. 6. Supra-renal Artery—Left Side. 7. Œsophageal Branch. 8. Anterior Branches of Phrenic. 9. Right Phrenic. [phragm. 10. Branches to the Crura of Dia- |
|--|--|

- | | |
|--|--|
| 11. Supra-renal Artery—Right Side. | 28. Sacra Media. |
| 12. Ramifications of the Phrenic Arteries. | 29. Fifth Lumbar Artery. |
| 13. Branches to Vena Cava. | 30. Iliac Artery. |
| 14. Gastric. | 31. Internal Iliac. |
| 15. Hepatic. | 32. External Iliac. |
| 16. Splenic. | 33. Posterior Trunk of Internal Iliac. |
| 17. Superior Mesenteric. | 34. Lateral Sacral. |
| 18. Supra-renal Branch. | 35. Obturator. |
| 19. Renal. | 36. Sciatic. |
| 20. Spermatic. | 37. Right Epigastric. |
| 21. Inferior Mesenteric. | 38. Left Epigastric. |
| 22. Colica Sinistra. | 39. Spermatic Branch. |
| 23. Sigmoid. | 40. Distribution to Abdominal Muscles. |
| 24. Superior Hemorrhoidal. | 41. Circumflex Iliacæ. |
| 25, 26, 27. Lumbar Arteries. | 42. Anastomoses with Ilio-lumbar. |

PLATES XXI AND XXII.

ARTERIES OF THE STOMACH.

- | | |
|--|--------------------------------------|
| <i>a.</i> Crura of the Diaphragm. | 7. The Pyloric Branch. |
| <i>b.</i> Œsophagus. | 8. Hepatic Artery. |
| <i>c.</i> Cardiac End of Stomach. | 9. Gastro-Duodenalis. |
| <i>d.</i> Pyloric End of Stomach. | 10. Pancreatic Branch. |
| <i>e.</i> Pyloric Valve. | 11. Pancreatico-duodenalis. |
| <i>f.</i> Duodenum. | 12. Gastro-epiploica Dextra. |
| <i>g.</i> Pancreas. | 13. Pyloric Branch. |
| <i>h.</i> Spleen. | 14. Gastric Branches. |
| <i>i.</i> Hilus. | 15. Branches to the Omentum. |
| <i>k.</i> Liver. | 16. Hepatic Artery. |
| <i>l.</i> Round Ligament of Liver. | 17. Cystic. |
| <i>m.</i> Suspensory Ligament. | 18. Splenic. |
| <i>n.</i> Gall Bladder. | 19. Pancreatic Branches. |
| <i>o.</i> Its Cervix. | 20. Gastro-Epiploica Sinistra. |
| <i>p.</i> Ductus Communis Choledochus. | 21. Its Inosculation with 12. |
| <i>q.</i> Vena Portæ. | 22. Vasa Brevia. |
| 1. Abdominal Aorta. | 23. Splenic Branches. |
| 2. Celiac Axis. | 24. Superior Mesenteric. |
| 3. Phrenic. | 25. Inferior Pancreatico-duodenalis. |
| 4. Gastric. | 26. Anastomosis of 25 with 11. |
| 5. Œsophageal Branch. | 27. Inferior Mesenteric. |
| 6. Its Anastomosis with 7. | |

FIG. II.

- | | |
|----------------------|-----------------------|
| <i>a.</i> Diaphragm. | <i>c.</i> Right Lobe. |
| <i>b.</i> Liver. | <i>d.</i> Left Lobe. |

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|--|---|
| <i>e.</i> Lobus Spigelii. | 5. Gastric Artery. |
| <i>f.</i> Lobus Quadratus. | 6. Œsophageal Branch. |
| <i>g.</i> Hepatic Duct. | 7. Gastric. |
| <i>h.</i> Gall Bladder. | 8. Branches to Cardiac End of Stomach. |
| <i>i.</i> Cystic Duct. | 9. Hepatic Artery. |
| <i>k.</i> Ductus Communis Choledochus. | 10. Gastro-duodenalis. |
| <i>l.</i> Vena Portæ. | 11. Gastro-epiploica Dextra. |
| <i>m.</i> Œsophagus. | 12. Duodenal Branch. |
| <i>n.</i> Stomach. | 13. Gastric Branches. |
| <i>o.</i> Œsophageal Opening. | 14. Branches to Omentum. |
| <i>p.</i> Cardiac End of Stomach. | 15. Pyloric Branch. |
| <i>q.</i> Pyloric End of Stomach. | 16. Pyloric Artery. |
| <i>r.</i> Pylorus. | 17. Hepatic Artery. |
| <i>s.</i> Duodenum. | 18, 19, 20. Division of Hepatic Arteries before entering the liver. |
| <i>t.</i> Spleen. | 21. Cystic Artery. |
| 1. Abdominal Aorta. | 22. Splenic Artery. |
| 2. Inferior Phrenic. | 23. Gastro-epiploica Sinistra. |
| 3. Celiac Axis. | |
| 4. Its Division. | |

PLATES XXIII AND XXIV.

INTESTINAL ARTERIES.

- | | |
|---|--------------------------------------|
| <i>a.</i> Pancreas. | 4. Colica Media. |
| <i>b.</i> Duodenum. | 5. Anastomoses with Colica Dextra. |
| <i>c.</i> Jejunum and Ileum. | 6. Anastomoses with Colica Sinistra. |
| <i>d.</i> Ascending Colon. | 7. Vasa Intestini Tenuis. tra. |
| <i>e.</i> Transverse Colon. | 8. Abdominal Aorta. |
| <i>f.</i> Descending Colon. | 9. Left Renal Artery. |
| <i>g.</i> Sigmoid Flexure. | 10. Spermatic Artery. |
| <i>h.</i> Rectum. | 11. Lumbar Arteries. |
| <i>i.</i> Transverse Mesocolon. | 12. Iliac Arteries. |
| <i>k.</i> Descending Mesocolon. | 13. Inferior Mesenteric. |
| <i>l.</i> Crest of Ilium. | 14. Colica Sinistra. |
| <i>m.</i> Anterior Superior Spine of Ilium. | 15. Ascending Branch. |
| 1. Superior Mesenteric Artery. | 16. Descending Branch. |
| 2. Inferior Pancreatico-duodenalis. | 17, 19. Superior Hemorrhoidal. |
| 3. Superior Pancreatico-duodenalis. | 18. Sigmoid. |

PLATES XXV AND XXVI.

SUPERIOR MESENTERIC ARTERY.

- | | |
|------------------------------|-------------------------------|
| <i>a.</i> Pancreas. | <i>e.</i> Cæcum. |
| <i>b.</i> Duodenum. | <i>f.</i> Vermiform Appendix. |
| <i>c.</i> Jejunum and Ileum. | <i>g.</i> Ascending Colon. |
| <i>d.</i> Ileo-cæcal Valve. | <i>h.</i> Hepatic Flexure. |

- | | |
|---|---|
| <p><i>i.</i> Transverse Colon.
 <i>k.</i> Splenic Flexure.
 <i>l.</i> Descending Colon.
 <i>m.</i> Anterior Muscular Band of Colon.
 <i>n.</i> Mesentery.
 1 to 6. Same as preceding plates.
 7. Ileo-colic.
 8. Colica Dextra.
 9. Ileo-colic.</p> | <p>10. Cæcal Branches.
 11. Branch to Vermiform Appendix.
 12. Ileac Branch of Ileo-colic.
 13. Anastomoses with Intestini Tenuis.
 14. Vasa Intestini Tenuis.
 15, 16, 17. Arches formed by Anastomoses of 14.
 18. Intestinal Branches.</p> |
|---|---|

PLATES XXVII AND XXVIII.

PELVIC ARTERIES IN THE MALE.

- | | | |
|---|-------------------|--|
| <p><i>a.</i> Lumbar Vertebrae.
 <i>b.</i> Sacrum.
 <i>c.</i> Coccyx.
 <i>d.</i> Symphysis Pubis.
 <i>e.</i> Longissimus Dorsi
 <i>f.</i> Gluteus Magnus
 <i>g.</i> Transversalis
 <i>h.</i> Rectus
 <i>i.</i> Iliacus
 <i>k.</i> Psoas Magnus
 <i>l.</i> Psoas Parvus
 <i>m.</i> Piriformis
 <i>n.</i> Levator Ani
 <i>o.</i> Spinal Canal.
 <i>p.</i> Obturator Nerve.
 <i>q.</i> Fifth Lumbar Nerve.
 <i>r.</i> First
 <i>s.</i> Second
 <i>t.</i> Third
 <i>u.</i> Bladder.
 <i>v.</i> Ureter.
 <i>w.</i> Vas Deferens.
 <i>x.</i> Vesicula Seminales.
 <i>y.</i> Rectum.
 1. Abdominal Aorta.
 2. Inferior Mesenteric.
 3. Lumbar.
 4. Sacra Media.
 5. Iliac Arteries.
 6. Internal Iliac.
 7. Posterior Trunk.
 8. Ilio-lumbar.</p> | <p>} Muscles.</p> | <p>9. Iliac Branch.
 10. Psoas, or Lumbar Branch.
 11. Anastomosis with Circumflex Ilii.
 12. Lateral Sacral.
 13. Branch to Levator Ani.
 14. Obturator Artery.
 15. Branch to Obturator Internus.
 16. Anastomosis with 38.
 17. Gluteal Artery.
 18. Anterior Trunk of Internal Iliac.
 19. Superior Vesical.
 20. Obliterated Hypogastric Artery.
 21. Middle Vesical.
 22. Inferior Vesical.
 23. Branch to Vesicula Seminales.
 24. Internal Pudic.
 25. Middle Hemorrhoidal.
 26. Branch to Levator Ani.
 27. Branch to Vesicula Seminales.
 28. Branches to Rectum.
 29. Sciatic Artery.
 30. Branch to Piriformis.
 31. External Iliac.
 32. Circumflex Iliac.
 33. Branches to Iliacus.
 34. Branches to Transversalis.
 35. Anastomosis with Ilio-lumbar.
 36. Epigastric.
 37. Obturator Branch.
 38. Anastomosis of 37, with 16 and 9.
 39. Cremasteric Branch.</p> |
|---|-------------------|--|

PLATES XXIX AND XXX.

PELVIC BRANCHES IN THE FEMALE.

- | | |
|--|-------------------------------------|
| <i>a.</i> Lumbar Vertebrae. | 6. Last Lumbar Artery. |
| <i>b.</i> Sacrum. | 7. Right Iliac. |
| <i>c.</i> Coccyx. | 8. Internal Iliac. |
| <i>d.</i> Symphysis Pubis. | 9. Lateral Sacral. |
| <i>e.</i> Horizontal Ramus of Pubes. | 10. Ilio-lumbar. |
| <i>f.</i> Longissimus Dorsi | 11. Lumbar Branch. |
| <i>g.</i> Gluteus Maximus | 12. Obturator. |
| <i>h.</i> Transversalis | 13. Branch to Obturator Internus. |
| <i>i.</i> Internal Inguinal Ring. | 14. Anastomosis with Epigastric. |
| <i>k.</i> Psoas Magnus | 15. Gluteal Artery. |
| <i>l.</i> Iliacus | 16. Superior Vesical. |
| <i>m.</i> Obturator Internus | 17. Obliterated Hypogastric Artery. |
| <i>n.</i> Piriformis | 18. Vesical Arteries. |
| <i>o.</i> Levator Ani | 19. Uterine Arteries. |
| <i>p, q, r, s, t, u.</i> Same as preceding plates. | 20. Vaginal Branches. |
| <i>v.</i> Vagina. | 21. Uterine Branch. |
| <i>w.</i> Uterus. | 22. Internal Pudic. |
| <i>x.</i> Round Ligament of Uterus. | 23. Middle Hemorrhoidal. |
| <i>y.</i> Fallopian Tube. | 24. Branch to Levator Ani. |
| <i>z.</i> Fimbriated Extremity. | 25. Sciatic Artery. |
| <i>a.</i> Ovary. | 26. Sacral Branch. |
| <i>b.</i> Rectum. | 27. Right External Iliac. |
| 1. Abdominal Aorta. | 28. Circumflex Iliac. |
| 2. Inferior Mesenteric Artery. | 29. Iliac Branch. |
| 3. Left Common Iliac. | 30. Anastomosis with Ilio-lumbar. |
| 4. Lumbar. | 31. Epigastric. |
| 5. Middle Sacral. | 32. Pubic Branch. |
| | 33. Muscular Branch. |

PLATES XXXI AND XXXII.

ARTERIES OF THE THIGH. ANTERIOR ASPECT.

- | | |
|------------------------------------|----------------------------------|
| <i>a, b.</i> External Oblique. | <i>n.</i> Adductor Magnus. |
| <i>c.</i> Rectus Abdominis. | <i>o.</i> Adductor Longus. |
| <i>d.</i> Sheath of Rectus. | <i>p.</i> Adductor Brevis. |
| <i>e.</i> Pyramidalis. | <i>q.</i> Pectineus. |
| <i>f.</i> External Abdominal Ring. | <i>r.</i> Vastus Externus. |
| <i>g.</i> Spermatic Cord. | <i>s.</i> Crureus. |
| <i>h.</i> Poupart's Ligament. | <i>t.</i> Rectus Femoris. |
| <i>i.</i> Crural Ring. | <i>u.</i> Vastus Externus. |
| <i>k.</i> Sartorius. | <i>v.</i> Tensor Vaginæ Femoris. |
| <i>l.</i> Gracilis. | <i>w.</i> Iliacus. |
| <i>m.</i> Semi-membranosus. | <i>x.</i> Psoas. |

y. Penis.

1. Femoral Artery.
2. Epigastric.
3. Circumflex Iliac. [Branches.
- 4 and 5. Cutaneous and Muscular
6. Superficial Femoral.
- 7, 8. External Pudic.
- 9 to 17. Muscular Branches.
18. Profunda Femoris.
19. Cutaneous Branch.
20. Muscular Branch.
21. Internal Circumflex.
22. Iliac Branch.
23. Superficial Circumflex Iliac.
24. Obturator.
- 25, 26. Anastomoses with Internal Circumflex.
- 27 to 29. Muscular Branches.
30. Scrotal Branch.

- 31, 34. Branches to Adductors.
35. Deep Femoral.
36. Branch to Sartorius.
37. Superior Perforating.
38. External Circumflex.
39. Ascending Muscular Branch.
- 40, 41. Perforating Arteries.
42. Branch to Adductors.
43. Ramifications of Profunda.
44. Obturator.
45. Superficial Muscular Branch.
46. Anastomosis with superficial Femoral.
47. Anastomoses with Epigastric.
48. Internal Branch of Obturator.
49. Muscular Branch to Abdomen.
50. Muscular Branch.
51. Anastomoses of 44 with 21.
52. Dorsalis Penis.

PLATES XXXIII AND XXXIV.

ARTERIES OF THE THIGH AND LEG. BACK VIEW.

- a.* Ilium.
- b.* Trochanter Major.
- c.* Tuberosity of Ischium.
- d.* Spine of Ischium.
- e.* Great Sacro-sciatic Ligament.
- f.* Femur.
- g.* Gluteus Maximus
- h.* Gluteus Medius
- i.* Gluteus Minimus
- k.* Pyriformis
- l.* Gemelli
- m, n.* Obturator Internus
- o.* Quadratus Femoris
- p.* Crus Penis
- q.* Transverse Perine
- r.* Levator Ani
- s, t.* Biceps Femoris
- s.* Long head. *t.* Short head.
- u.* Adductor Magnus
- v.* Semi-membranosus
- w.* Semi-tendinosus
- x.* Vastus Externus
- y.* Plantaris

Muscles.

- z.* Internal Condyle.
- a.* Tendon of Gracilis
- β.* Tendon of Sartorius.
1. Gluteal Artery.
2. Internal Pudic.
3. Perineal.
4. Branch to External Sphincter.
5. Artery of the Bulb.
6. Deep Branch.
7. Perineal Branches.
8. Branch to Ischium.
9. Branch to Levator Ani.
10. Anastomoses with Circumflux Arteries.
11. Branches of Sciatic, which join with Circumflux Arteries.
12. Sciatic Branch to Gluteal Muscles.
13. Anastomosis with Superior Perforating.
14. Internal Circumflex. [Pudic.
- 15, 16. Anastomosis with Internal
17. Muscular Branch.

- | | |
|----------------------------------|------------------------------------|
| 18, 19. Superior Perforating. | 27, 28. Branches of Fourth Perfor- |
| 20. Muscular Branch. | 29. Temporal Artery. [ating. |
| 21. Its Anastomosis with 18. | 30. Popliteal Artery. |
| 22, 24. Perforating Branches. | 31. Superior Internal Articular. |
| 25. Muscular Branches. | 32. Muscular Branch. |
| 26. Branch of Third Perforating. | 33. External Posterior Articular. |

FIG. II.

- | | |
|---------------------------------|-----------------------------|
| a. Gastrocnemius Muscle. | 4. Cutaneous. |
| b. Tendo Achillis. | 5. Peroneal. |
| c. Tendon of Peroneus Longus. | 6. Anastomosis with 4. |
| 1. Popliteal Artery. | 7. Anastomosis with 8. |
| 2. Muscular Branch. | 8. Posterior Tibial Artery. |
| 3. Inferior Internal Articular. | 9. Branches to Os Calcis. |

FIGS. III AND IV. ARTERIÆ HELICINÆ OF THE CORPUS CAVERNOSUM PENIS.

Fig. 3. Natural Position.

Fig. 4. Injected.

PLATES XXXV AND XXXVI.

ARTERIES OF THE KNEE JOINT.

FIG. I. INTERNAL ASPECT OF KNEE JOINT.

- | | | |
|---------------------------------|----------------------------------|-----------------------------------|
| a. Semi-membranosus | } MUSCLES. | 4. Anastomosis with Inferior Ar- |
| b. Gracilis | | ticular. |
| c. Sartorius | | 5. Internal Superior Articular. |
| d. Tendon of Adductor Magnus | | 6. Nutrient Branch. |
| e, f. Vastus Internus | | 7. Branch to Internal Condyle. |
| g. Tendon of Semitendinosus | | 8. Continuation of 5 to Patella. |
| h. Gastrocnemius | | 9. Anastomosis of Internal Artic- |
| i. Patella. | | ular Arteries. |
| k. Fascia Lata. | | 10. Anastomosis with External Ar- |
| 1. Popliteal Artery. | | ticular Arteries. |
| 2. Internal Superior Articular. | 11. Inferior Internal Articular. | |
| 3. Muscular Branch. | 12. Tibial Branch. | |

FIG. II. EXTERNAL ASPECT OF KNEE.

- | | | |
|------------------------------------|------------|------------------------------------|
| a, b. Biceps Muscle. | } MUSCLES. | 2. Anastomosing Branch of Infer- |
| c. Vastus Externus. | | ior Perforating. |
| d. External Lateral Ligament. | | 3, 4. Branches to the Condyles. |
| e. Aponeurosis. | | 5. Superficial Branch of 1. [tery. |
| f. Opened Capsular Ligament. | | 6. Inferior External Articular Ar- |
| g. Gastrocnemius. | | 7. Branch to External Condyle. |
| h. Soleus | | 8. Anastomoses with Internal Ar- |
| i. Peroneus Longus | | ticular Arteries. |
| k. Extensor Longus Digitorum | | 9. Anterior Tibial Artery. |
| l. Tibialis Anticus Muscle. [tery. | | 10. Recurrent Tibial. |
| 1. Superior External Articular Ar- | | 11. Branch to Ligaments and Tibia. |

FIG. III. ANTERIOR ASPECT OF KNEE JOINT.

<i>a.</i> Patella.		<i>k.</i> Tibialis Anticus Muscle.
<i>b.</i> Ligamentum Patellæ.		<i>l.</i> Tibia.
<i>c.</i> Vastus Internus	} MUSCLES.	1. Anterior Tibial Artery.
<i>d.</i> Rectus Femoris		2. Branches to Ligaments of Joints.
<i>e.</i> Vastus Externus		3. Internal Inferior Articular.
<i>f, g.</i> Biceps.		4. Internal Superior Articular.
<i>h.</i> Peroneus Longus		5. External Superior Articular.
<i>i.</i> Extensor Longus Digitorum		

FIG. IV. POSTERIOR ASPECT OF KNEE JOINT.

<i>a.</i> Biceps	} Muscles.	3. Branch to Gastrocnemius (sural)
<i>b.</i> Semi-membranosus		4. Internal Superior Articular.
<i>c.</i> Semi-tendinosus		5. Anastomosis with 6.
<i>d.</i> Gastrocnemius		6. Branch to Gastrocnemius (sural)
<i>e.</i> Plantaris		7. Internal Inferior Articular.
<i>f.</i> Soleus		8, 9. Sural.
<i>g.</i> Popliteus		10. Division of Tibialis Anterior and Peroneus.
1. Pepliteal Artery.		11. Posterior Tibial Artery.
2. Superior External Articular.		

PLATES XXXVII AND XXXVIII.

ARTERIES OF THE CALF AND PLANTAR SURFACE OF THE FOOT.

FIG. I.

<i>a.</i> Tibia.	} MUSCLES.	10. Dorsalis Pedis Artery.
<i>b.</i> Gastrocnemius		11, 12. Tarsal.
<i>c.</i> Tibialis Anticus		13. Metatarsal Interosseæ.
<i>d.</i> Extensor Longus Pollicis		14. Division into Dorsal Pollicis and Anastomotic Branch, and into 15.
<i>e.</i> Interosseous Ligament.		15. Second Dorsal Collateral Branch
<i>f.</i> Extensor Longus Digitorum	} MUSCLES.	16. Internal Branch of Dorsalis Hallucis.
<i>g.</i> Peroneus Longus		17. Second Interosseous.
<i>h.</i> Extensor Brevis Digitorum		18. Second Digital.
1. Anterior Tibial Artery.		19. Second Dorsal Collateral.
2. Branch to Knee Joint.		20. Third Digital.
3 to 6. Muscular Branches.		21 to 26. Digital Arteries of the Toes.
7. Internal Malleolar.		27. Dorsal Arch.
8. External Malleolar.		
9. Anastomosis with Dorsal Arteries of Foot.		

FIG. II.

<i>a.</i> Plantaris	} Muscles.	<i>e.</i> Flexor Longus Hallucis	} Muscles.
<i>b.</i> Soleus		<i>f.</i> Flexor Longus Digitorum	
<i>c.</i> Popliteus		<i>g.</i> Tendon of Peroneus Brevis	
<i>d.</i> Peroneus Longus		<i>h.</i> Tendo Achillis	

- | | |
|--|---|
| 1. Popliteal Artery. | 13. Posterior Tibial. |
| 2. Origin of Peroneal and Anterior Tibial. | 14 to 17. Muscular Branches. |
| 3, 4. Sural Branches. | 18. Branch to Nerves. |
| 5. Anterior Tibial. | 19 to 21. Cutaneous Branches and Anastomosis. |
| 6. Peroneal. | 22 to 23. Anastomosis with Peroneal. |
| 7, 8. Muscular Branch. | 24. Anastomosis with Tibialis Antica. |
| 9. Cutaneous Branch of Peroneal. | 25. Anterior Tibial. |
| 10, 11. Anastomosis with Posterior Tibial. | 26, 27, 28. Muscular Branches. |
| 12. Termination of Peroneal. | |

FIG. III. PLANTAR SURFACE OF THE FOOT.

- | | |
|--|--|
| <i>a.</i> Calcaneum. | 9. Internal Plantar. |
| <i>b, c.</i> Astragalus. | 10. Deep Branch. |
| <i>d.</i> Scaphoid. | 11. Branch to Plantar Aponeurosis. |
| <i>e.</i> First Cuneiform. | 12. Anastomosis with 7. |
| <i>f.</i> Metatarsal Bone of Great Toe. | 13. External Plantar Artery. |
| <i>g, h.</i> First and Second Phalanx of Great Toe. | 14. Calcanean Branch. |
| <i>i.</i> Fifth Metatarsal Bone. | 15. Anastomosis with Peroneal. |
| <i>k.</i> Transversus Pedis. [rum. | 19, 22, 25, 27, 29. Interosseous. |
| <i>l.</i> Tendon of Flexor Longus Digitorum, <i>s.</i> Interossei. | 20. External Digital Branch of Little Toe. |
| <i>t.</i> Long Calcaneo-cuboid Ligament. | 21. Beginning of Plantar Arch. |
| <i>u.</i> Short Calcaneo-cuboid Ligament. | 23. Anastomosis with Vessels of Little Toe. |
| <i>v.</i> Interosseous Ligament. | 24, 28, 30, 35. Division of Interossei into Internal and External Digital. |
| <i>w.</i> Origin of Abductor Pollicis. | 26. Muscular Branch. |
| 1. Posterior Tibial Artery. | 31. Plantar Arch. [ial. |
| 2. Cutaneous Branch. | 32. Anastomosis with Anterior Tibial. |
| 3. Branch to Os Calcis. | 33. Anastomosis with 11. |
| 4. Calcanean Branch. | 34. Internal Plantar Branch to Great Toe. |
| 5. Muscular Branch. | |
| 6. Internal Plantar Artery. | |
| 7. Communicating Branch. | |
| 8. Branch to the Plantar Ligaments. | |

PLATES XXXIX AND XL.

VEINS OF THE HEAD.

- | | |
|----------------------------|-------------------------------------|
| <i>a.</i> Frontalis Musc. | <i>g.</i> Orbicularis Palpebrarum. |
| <i>b.</i> Aponenrosis. | <i>h.</i> Compressor Naris. |
| <i>c.</i> Attolens Aurem. | <i>i.</i> Levator Labii Superioris. |
| <i>d.</i> Occipital Musc. | <i>k.</i> Levator Anguli Oris. |
| <i>e.</i> Retrahens Aurem. | <i>l.</i> Orbicularis Oris. |
| <i>f.</i> Ear. | <i>m.</i> Depressor Anguli Oris. |

- | | |
|---|---|
| <p><i>n.</i> Platysma Myoides.
 <i>o.</i> Internal Pterygoid.
 <i>p.</i> Digastric.
 <i>q.</i> Zygomatic Major.
 <i>r.</i> Steno's Duct. [moved.
 <i>s.</i> Zygomatic Process of Malar re-
 <i>t.</i> Temporal Muscle.
 <i>u.</i> Zygomatic Process of Temporal
 Bone removed.
 <i>v, w.</i> Sterno-cleido-mastoid.
 <i>x.</i> Splenius Capitis et Colli.
 <i>y.</i> Levator Anguli Scapulæ.
 <i>z.</i> Its Origin.
 <i>a.</i> Omo-hyoid.
 <i>β.</i> Scalenus Medius.
 <i>γ.</i> Scalenus Anticus.
 <i>δ.</i> Thyroid Gland.
 <i>ε.</i> Sterno-thyroid.
 <i>ζ.</i> Sterno-hyoid.
 <i>η.</i> Thyro-hyoid.
 <i>θ.</i> Thyroid Cartilage.
 <i>ι.</i> Cricoid Cartilage.
 1. Vena Cava Superior.
 2. Right Subclavian Vein.
 3. External Jugular.
 4. Anterior Jugular.
 5. Transverse Jugular.
 6. Cutaneous Vein.
 7. Mental. [ular.
 8. Anastomosis with External Jug-
 9. Submaxillary Branch.
 10. Anastomoses with Temporal Vein
 11. External Jugular.
 12. Anastomosis with Transversalis
 Colli.
 13. Muscular Branch.
 14. Anastomosis with Subclavian.
 15. Posterior External Jugular.
 16. Anastomosis with 8.
 17. Anastomosis with 3.
 18. Parotid Branch.
 19. Occipital.
 20. Anastomosis with Temporal.
 21. Transversalis Colli.
 22. Muscular Branch.
 23. Muscular Branch.</p> | <p>24. Superficial Occipital.
 25. Internal Jugular.
 26. Superior Thyroid.
 27. Cerebral Portion of 25.
 28. Facial.
 29. Laryngeal.
 30. Facial.
 31. Submaxillary.
 32. Submental.
 33. Anastomosis with Labial Veins.
 34. Masseteric.
 35. Inferior Labial.
 36. Inferior Buccal.
 37. Middle Labial.
 38. Superior Buccal.
 39. Inferior Labial, Superior Branch
 40. Mental Plexus.
 41. Labial Plexus.
 42. Superior Labial Branch.
 43. Deep Branch of Facial.
 44. Superior Dental.
 45. Posterior Nasal.
 46. Ophthalmic.
 47. External Palpebral.
 48. Inferior Palpebral Plexus.
 49. Superior Labial.
 50. Superior Labial Plexus.
 51. Nasal.
 52. Inferior Palpebral.
 53. Nasal Branch.
 54. Nasal Plexus.
 55. Dorsalis Nasi.
 56. Frontal Vein.
 57. Dorsalis Nasi.
 58. Nasal Plexus.
 59. Anastomoses with Temporal.
 60. Supra-orbital.
 61. Superior Palpebral.
 62. Superior Palpebral Plexus.
 63. Supra-orbital.
 64. Anastomoses with Temporal.
 65. Temporo-maxillary.
 66. Parotid Branch.
 67. Muscular Branches.
 68. Posterior Auricular.
 69. Transverse Facial.</p> |
|---|---|

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|--|---------------------------------------|
| 70. Superficial Branch. | 87. External Branch. |
| 71. Deep Branch. | 88. Anastomosing Branch. |
| 72. Deep Temporal. | 89. Internal Branch. |
| 73. Superior Branch. | 90. Anastomosis with External Branch. |
| 74. Anastomoses with Anterior Articular. | 91. Anastomoses of Temporal Branches. |
| 75. Deep Branch of Temporal. | 92. Branches joining Deep Temporal. |
| 76. Inferior Maxillary. | 93. Anastomoses with Frontal Vein. |
| 77. Anastomoses with Buccal. | 94. Deep Temporal. |
| 78. Muscular Branches. | 95. Muscular Branches. |
| 79. Anastomoses with Transverse Facial. | 96. Superior Frontal. |
| 80. Temporal. | 97. Anastomosis with Supra-orbital. |
| 81, 82, 83. Muscular Branches. | 98. Common Carotid Artery. |
| 84. Anterior Articular. | 99. Superior Thyroid Artery |
| 85. Anterior Auricular. | 100. External Carotid Artery. |
| 86. Temporal. | |

PLATES XLI AND XLII.

VEINS OF NECK AND TRUNK.

- | | |
|-------------------------------|------------------------------------|
| <i>a.</i> Masseter. | <i>a.</i> Psoas Magnus. |
| <i>b.</i> Mylo-hyoides. | 1. Superior Vena Cava. |
| <i>c.</i> Os Hyoid. | 2. Vena Azygos. |
| <i>d.</i> Thyro-hyoid. | 3. Anastomosing Branch. |
| <i>e.</i> Thyroid Gland. | 4. Innominate. |
| <i>f.</i> Submaxillary Gland. | 5. Internal Mammary. |
| <i>g.</i> Trachea. | 6. Inferior Communicating. |
| <i>h.</i> Clavicle. | 7. Muscular Branch. |
| <i>i.</i> Deltoid. | 8. Vertebral. |
| <i>k.</i> Pectoralis Minor. | 9. Anterior Jugular. [ular. |
| <i>l.</i> Pectoralis Major. | 10. Anastomosis with External Jug- |
| <i>m.</i> Biceps. | 11. Cutaneous Branch. |
| <i>n.</i> Latissimus Dorsi. | 13. Inferior Thyroid. |
| <i>o.</i> Ribs. | 13, 14. Left External Jugular. |
| <i>p.</i> Intercostals. | 14. Right External Jugular. |
| <i>q.</i> Heart. | 15. Supra-scapular. |
| <i>r.</i> Left Auricle. | 16. Muscular Branch. |
| <i>s.</i> Right Auricle. | 17. Communicating Branch to In- |
| <i>t.</i> Apex. | ternal Jugular. |
| <i>u.</i> Diaphragm. | 18, 19. Communicating Branches. |
| <i>v.</i> Œsophagus. | 20. Submental. |
| <i>w.</i> Kidneys. | 21. Temporo-maxillary. |
| <i>x.</i> Suprarenal Capsule. | 22. Internal Jugular. |
| <i>y.</i> Ureters. | 23. Facial. |
| <i>x.</i> Quadratus Lumborum. | 24. Subclavian. |

- | | |
|--|------------------------------|
| 25. Cephalic. | 39. Pulmonary Artery. |
| 26. Junction of Posterior Circum-
flex and Subscapular. | 40. Left Pulmonary Artery. |
| 27. Brachial. | 41. Aorta. |
| 28. Basilic. | 42. Innominate Artery. |
| 29. Muscular Branch. | 43. Right Subclavian Artery. |
| 30. Greater Anterior Coronary. | 44. Right Common Carotid. |
| 31. Lesser Anterior Coronary. | 45. Superior Thyroid. |
| 32. Inferior Vena Cava. | 46. Left Common Carotid. |
| 33. Phrenic Branch. | 47. Left Subclavian. |
| 34. Hepatic. | 48. Abdominal Aorta. |
| 35. Renal. | 49. Cæliac Axis. |
| 36. Suprarenal. | 50. Superior Mesenteric. |
| 37. Phrenic. | 51. Renal. |
| 38. Spermatic. | 52. Lumbar. |
| | 53. Inferior Mesenteric. |

PLATES XLIII AND XLIV.

VEINS OF THE ARM.

FIGS. I AND III.

- | | |
|-----------------------------------|----------------------------|
| a. Deltoid. | 5. Radial. |
| b. Pectoralis Major. | 6. Basilic. |
| c. Muscles of the Arm. [of Digit. | 7. Anastomosing Branches. |
| 1. Plexus of Veins on Palmar side | 8. Ulnar. Cephalic. |
| 2. Superficial Palmar Plexus. | 9. Median. |
| 3. Carpal Branches. | 10. Median Cephalic. |
| 4. Digital Veins of Thumb. | 11. Anastomosing Branches. |

FIGS. II AND IV. DEEP VEINS OF ARM.

- | | |
|--------------------------------|--|
| a. Clavicle. | s. Supinator Longus. |
| b. Pectoralis Major. | t. Flexor Longus Pollicis. |
| c. Pectoralis Minor. | u. Tendon of Flexor Digitorum. |
| d. Deltoid. | v. Abductor Minimi Digiti. |
| e. Latissimus Dorsi. | w. Adductor Pollicis. |
| f. Biceps—Short Head. | 1. Ungual Arch of Digital Veins. |
| g. Coraco-brachialis. | 2. Radial Palmar Digital Veins. |
| h. Biceps. | 3. Ulnar Digital Veins. |
| i. Its Long Head. | 4. Anastomoses with Dorsal Veins. |
| k. Long Head of Triceps. | 5. Digital Veins. |
| l. Flexor Longus Digitorum. | 6. Anastomoses with Deep Palmar
Arch. |
| m. Pronator Radii Teres. | 7. Superficial Palmar Arch. |
| n. Flexor Profundus Digitorum. | 8. Beginning of Radial Vein. |
| o. Its Tendon. | 9. Its Dorsal Branch. |
| p. Flexor Carpi Ulnaris. | 10. Radial Vein. |
| q. Pronator Quadratus. | 11. Muscular Branch. |
| r. Brachialis Anticus. | |

- | | |
|--|---|
| 12. Junction of Interosseous and Ulnar Vein. | 28. Brachial Veins. |
| 13. Ulnar Vein. | 29. Muscular Branch. |
| 14. Branches from the Little Finger. | 30. Anterior Circumflex. |
| 15. Dorsal Branch. | 31. Anastomosis with Basilic. |
| 16. 17. Muscular Branches. | 32. Basilic. |
| 18. Same as 12. | 33. Junction of 32 with Axillary Veins. |
| 19. Muscular Branch. | 34. Muscular Branch. |
| 20. Recurrent Ulnar Vein. [ous. | 35. Collateral Ulnar. |
| 21. Palmar Branches of Interosse- | 36. Muscular Branch. |
| 22. Anastomoses with Radial. | 37. Subscapular. |
| 23. Anastomoses with Ulnar. | 38. Cephalic. |
| 24. Internal Interosseous. | 39. Median. |
| 25. 26. Muscular Branches. | 40. Brachial Artery. |
| 27. Nutrient Vein of Radius. | 41. Radial Artery. |

PLATES XLV AND XLVI.

VEINS ON POSTERIOR ASPECT OF ARM.

FIGS. I AND II. SUPERFICIAL VEINS.

- | | | |
|---------------------------------------|------------|--------------------------------------|
| <i>a.</i> Clavicle | } Muscles. | 9. Carpal Veins of Dorsal Surface. |
| <i>b.</i> Deltoid | | 10. External Radial. |
| <i>c.</i> Pectoralis Minor | | 11. Anterior Veins of Forearm. |
| <i>d.</i> Pectoralis Major | | 12. Posterior Ulnar. |
| <i>e.</i> Coraco-brachialis | | 13. Anastomoses with Anterior Ulnar. |
| <i>f.</i> Triceps | | 14. Cephalic. |
| <i>g.</i> Brachial Facia. | | 15. Cutaneous Branches. |
| 1. Dorsal Plexus of Digital Veins. | | 16. Basilic. |
| 2. Radial Branches of Dorsal Digital. | | 17. Median. |
| 3. Ulnar Branches of Dorsal Digital. | | 18. Dorsal Branches of Cephalic. |
| 4. Anastomosing Branches to Palmar | | 19. Brachial. |
| 5. Dorsal Arch. | | 20. Anterior Circumflex. |
| 6. Dorsal Digital Branch of Thumb. | | 21. Subscapular. |
| 7. Vena Salvatella. | | 22. Axillary. |
| 8. Anastomoses with Deep Dorsal. | | |

FIGS. III AND IV. DEEP VEINS OF UPPER EXTREMITY.

- | | | |
|------------------------------|------------|--|
| <i>a.</i> Scapula. | } Muscles. | <i>k.</i> Triceps Muscle. |
| <i>b.</i> Clavicle. | | <i>l.</i> Olecranon. |
| <i>c.</i> Neck of Humerus. | | <i>m.</i> Subanconeus Muscle. |
| <i>d.</i> Infra-spinatus | | <i>n.</i> Internal Condyle. |
| <i>e.</i> Teres Minor | | <i>o.</i> Extensor Communis Digitorum. |
| <i>f.</i> Supra-spinatus | | <i>p.</i> Ulna. |
| <i>g.</i> Deltoid | | <i>q.</i> Radius. |
| <i>h.</i> Triceps | | <i>r.</i> Interosseous Ligament. |
| <i>i.</i> Brachialis Anticus | | <i>s.</i> Supinator Brevis Muscle. |

- | | | | |
|--|---|----------|--|
| <p><i>t.</i> Supinator Longus Muscle.
 <i>u.</i> Extensor Carpi Radialis Longior.
 <i>v.</i> Extensor Carpi Radialis Brevior.
 <i>w.</i> Abductor Longus Pollicis
 <i>x.</i> Extensor Brevis Pollicis
 <i>y.</i> Extensor Indicis
 <i>z.</i> Abductor Minimi Digni</p> | } | Muscles. | <p>11. Anastomoses with 7.
 12. Anastomoses with 2,
 13. Anastomosis of Cephalic and Radial.
 14. Dorsal Branch of Interosseous.
 15. Anastomoses of Deep and Superficial Veins.
 16. Anastomosis with Cephalic.
 17, 18, 19. Muscular Branches.
 20. External Interosseous.
 21. Collateral Radial.
 22. Deep Brachial.
 23. Muscular Branches.
 24. Brachial.
 25. Posterior Circumflex.
 26. Basilic.
 27. Subscapularis.</p> |
|--|---|----------|--|
1. Superficial Dorsal Digital Veins.
 2. Dorsal Interosseus.
 3, 4. Perforating Veins.
 5. Dorsal Branches of Radial.
 6. Branch to Dorsal Digital of Thumb.
 7. Deep Dorsal Plexus.
 8. Vena Salvatella.
 9. Dorsal Pollicis.
 10. Radial.

PLATES XLVII AND XLVIII.

SUPERFICIAL VEINS OF LOWER EXTREMITY.

FIG. I. INTERNAL SAPHENOUS.

- | | |
|---|---|
| <p>1. Branches from the Sole of the Foot.
 2. Internal Dorsal Digital Veins.
 3. External Dorsal Digital Veins.
 4. Superficial Metatarsals.
 5. Superficial Dorsal Arch.
 6. Beginning of Long Saphenous.
 7, 8. Internal and External Branches
 9. Long Saphenous Branch.</p> | <p>10. Anastomosis with Posterior Tibial Vein.
 11. Muscular Branches.
 12. Branch from the Knee Joint.
 13. Musculo-cutaneous Branch.
 14. External Pudic Branch.
 15. Crural Vein. [Vein.
 16. Termination of Long Saphenous
 17. Musculo-cutaneous Branch.</p> |
|---|---|

FIG. II. EXTERNAL SAPHENOUS VEIN.

- | | |
|---|--|
| <p>1 to 6. Same as Figure 1.
 7. Deep Communicating Branch.
 8. Beginning of Cutaneous Vein.
 9. External Saphenous.
 10. Anastomosis with Anterior Tibial.</p> | <p>11. Anastomosis with Internal Saphenous.
 12. Muscular Branches.
 13. Termination of External Saphenous.
 14. Musculo-cutaneous Branch.</p> |
|---|--|

FIG. III. VEINS OF DORSUM OF FOOT.

- | | |
|---|--|
| <p><i>a.</i> Tibia.
 <i>b.</i> Fibula.
 <i>c.</i> Crucial Ligament.
 <i>d.</i> Extensor Communis Digitorum.
 <i>e.</i> Extensor Longus Pollicis Muscle.
 <i>f.</i> Tibialis Anticus Muscle.</p> | <p>1 to 9. Same as Figure 1.
 10. Plexus on outer Malleolus.
 11. Deep Veins of the Dorsalis Pedis.
 12. Their Anastomoses.
 13. Anterior Tibial Vein.</p> |
|---|--|

FIG. IV. VEINS OF THE PLANTAR SURFACE OF FOOT.

- | | |
|---|--|
| <ul style="list-style-type: none"> <i>a.</i> Tibia. <i>b.</i> Fibula. <i>c.</i> Calcaneum. <i>d.</i> Long Calcaneo-cuboid Ligament. <i>e.</i> Interossei Muscles. <i>f.</i> Tendons of Flexor Longus Digitorum. 1, 2. Digital Plantar Veins. 3. Their Phalangeal Anastomoses. | <ul style="list-style-type: none"> 4. Plantar Interosseous. 5. External Plantar Vein. 6. Anastomosing Branch to Anterior Tibial. 7. Calcaneoid Branches. 8. Internal Plantar Vein. 9. Dorsal Cutaneous Branch. 10. Internal Malleolar Branch. 11. Posterior Tibial Vein. |
|---|--|

PLATES XLIX AND L.

FIG. I. ANTERIOR TIBIAL VEIN.

- | | |
|---|--|
| <ul style="list-style-type: none"> <i>a.</i> Tibia. <i>b.</i> External Malleolus. <i>c.</i> Tibialis Anticus Muscle. <i>d.</i> Extensor Communis Digitorum. <i>e.</i> Its Tendon. <i>f.</i> Extensor Longus Hallucis Muscle <i>g.</i> Tarsus. <i>h.</i> Abductor Minimi Digiti Muscle. 1. Superficial Digital Veins. 2. Deep Branches. 3. Branch to Sole of Foot. 4. Radices of Internal Saphenous. | <ul style="list-style-type: none"> 5. Interosseous Veins. 6. Perforating Branches. 7. Deep Dorsal Arch. 8. Anterior Tibial Vein. 9. Internal Malleolar Vein. 10. External Malleolar Vein. 11. Branch of Peroneal Vein. 12. Anastomosis with Anterior Tibial. 13. Anterior Tibial Veins. 14. Recurrent Tibial. 15. Anterior Tibial Artery. |
|---|--|

FIG. II. POSTERIOR TIBIAL AND PERONEAL VEINS.

- | | | |
|--|---|--|
| <ul style="list-style-type: none"> <i>a.</i> Gracilis <i>b, c.</i> Biceps Femoris <i>d.</i> Semi-membranosus <i>e.</i> Semi-tendinosus <i>f.</i> Gastrocnemius <i>g.</i> Plantaris <i>h.</i> Soleus <i>i.</i> Popliteus <i>k.</i> Tibialis Posticus <i>l.</i> Flexor Longus Hallucis <i>m.</i> Peroneus Longus <i>n.</i> External Malleolus. <i>o.</i> Tendon of Flexor Communis Digitorum. <i>p.</i> Tendo Achillis. <i>q.</i> Calcaneum. 1. Peroneal Veins. 2. Anastomosis with External Mal- | <div style="font-size: 4em; line-height: 1; display: inline-block; vertical-align: middle;">}</div> <div style="font-size: 1.5em; line-height: 1; display: inline-block; vertical-align: middle; transform: rotate(-90deg);">Muscles.</div> | <ul style="list-style-type: none"> 3, 4. Muscular Branches. 5. Posterior Tibial. 6, 7, 8, 9. Muscular and Communicating Branches. 10. Nutrient Vein. 11. Muscular Branch. 12. Peroneal Vein. 13. Posterior Tibial. 14. Popliteal. 15. Superior External Articular Vein 16. Inferior Internal Articular. 17. Muscular Branch. 18. Superior Internal Articular. 19. Muscular Branch. 20. Popliteal Artery. 21. Posterior Tibial Artery. 22. Peroneal Artery. |
|--|---|--|

FIG. III.

<i>a.</i> Lumbar Vertebrae.	<i>o.</i> Gluteus Maximus	} Muscles.
<i>b.</i> Sacrum.	<i>p.</i> Quadratus Femoris	
<i>c.</i> Ilium.	<i>q.</i> Obturator Externus	
<i>d.</i> Great Sacro-sciatic Notch.	<i>r.</i> Adductor Magnus	
<i>e.</i> Tuberosity of Ischium.	<i>s.</i> Semi-membranosus	
<i>f.</i> Sacro-sciatic Ligament.	1. Internal Iliac Vein.	
<i>g.</i> Trochanter Major.	2. Gluteal.	
<i>h.</i> Obturator Internus.	3. Anastomosis with Ischiatic.	
<i>i, k.</i> Gemelli.	4. Superior Circumflex Ilii.	
<i>l.</i> Pyriformis	5. Inferior Circumflex Ilii.	
<i>m.</i> Gluteus Minimus	6 to 12. Muscular Branches.	
<i>n.</i> Gluteus Medius	9. Ischiatic Vein.	

PLATES LI AND LII.

PELVIC VEINS.

<i>a.</i> Crest of Ilium.	7. Supra-renal Branch.
<i>b.</i> Symphysis Pubis.	8. Lumbar Veins.
<i>c.</i> Tuberosity of Ischium.	9. Their Anastomoses.
<i>d.</i> Spine of Ischium.	10. Muscular Branch.
<i>e.</i> Lesser Sacro-sciatic Ligament.	11. Ilio-lumbar Vein.
<i>f.</i> Greater Sacro-sciatic Ligament.	12. Circumflex Iliac.
<i>g.</i> Great Sacro-sciatic Notch.	13. Spermatic Vein.
<i>h.</i> Sacrum.	14. Common Iliac Vein.
<i>i.</i> Iliacus	15. External Iliac.
<i>k.</i> Quadratus Lumborum	16. Internal Iliac.
<i>l.</i> Psoas Muscle.	17. Ilio-lumbar.
<i>m.</i> Kidney.	18. Fourth Lumbar.
<i>n.</i> Ureter.	19. Sacra Media.
<i>o.</i> Suprarenal Capsule.	20. Ischiatic.
<i>p.</i> Diaphragm.	21. Anastomosis with middle Sacral.
<i>q.</i> Obturator Nerve.	22. Anastomosis with Gluteal.
1. Abdominal Aorta.	23. Comes Nervi Ischiadici.
2. Coeliac Axis.	24. Anastomosis with Hemorrhoidal.
3. Superior Mesenteric Artery.	25. Branch of Vesical Plexus.
4. Vena Cava Inferior.	26. Origin of Gluteal Vein.
5. Renal Vein.	27. Gluteal Vein.
6. Renal Branch.	

PLATES LIII AND LIV.

VENA PORTÆ.

<i>a.</i> Diaphragm.	<i>e.</i> Kidney.
<i>b.</i> Liver.	<i>f.</i> Pyloric End of Stomach.
<i>c.</i> Round Ligament of Liver.	<i>g.</i> Pyloric Valve.
<i>d.</i> Spleen.	<i>h.</i> Duodenum.

- | | |
|------------------------------------|---------------------------------------|
| <i>i.</i> Jejunum. | 4. External Iliac Artery. |
| <i>k.</i> Cæcum. | 5. Vena Cava Ascendens. |
| <i>l.</i> Anterior Colic Ligament. | 6. Common Iliac Vein. |
| <i>m.</i> Ascending Colon. | 7. Internal Iliac Vein. |
| <i>n.</i> Descending Colon. | 8. External Iliac Vein. |
| <i>o.</i> Sigmoid Flexure. | 9. Vena Portæ. |
| <i>p.</i> Bladder. | 10. Origin of Phrenic Gastric Veins. |
| <i>q.</i> Ureter | 11. Colica Media. |
| <i>r.</i> Pubes. | 12. Left Branch of Colica Media. |
| <i>s.</i> Ilium. | 12. Its junction with the Mesenteric. |
| <i>t.</i> Acetabulum. | 14. Inferior Mesenteric. |
| <i>u.</i> Obturator Externus. | 15. Colica Sinistra and Hemorrhoidal. |
| <i>v.</i> Crus Penis. | 16. Splenic Vein. [Vein. |
| <i>w.</i> Accelerator Urinæ. | 17. Branches of Superior Mesenteric |
| <i>x.</i> Urethra. | 18. Ileo-colic Vein. |
| <i>y.</i> Corpora Cavernosa Penis. | 19. Cæcal Vein. |
| <i>z.</i> Suspensory Ligament. | 20. Gastro-epiploica. [tra. |
| 1. Abdominal Aorta. | 21. Gastro-epiploica Dextra et Sinis- |
| 2. Common Iliac. | 22. Gastric Vein. |
| 3. Internal Iliac. | |

PLATES LV AND LVI.

FIGS. I AND II. SINUSES OF THE BRAIN AND VENOUS PLEXUS OF THE SPINAL CORD.

- | | |
|--|-----------------------------------|
| <i>a.</i> Dura Mater. | <i>o.</i> Cauda Equina. |
| <i>b.</i> Cerebellar Portion. | <i>p.</i> Sacrum. |
| <i>c.</i> Cranial Bones. | <i>q.</i> Coccyx. |
| <i>d.</i> Mastoid Process. | 1. Superior Longitudinal Sinus. |
| <i>e.</i> Foramen Magnum. | 2. Vena Sartorium. |
| <i>f.</i> Lower Jaw. | 3. Transverse Sinus. |
| <i>g.</i> Atlas. | 4. Torcular Herophili. |
| <i>h.</i> Axis. [Vertebræ. | 5. Occipital. |
| <i>i.</i> Transverse Processes of Cervical | 6. Middle Meningeal Vein. |
| <i>k.</i> Transverse Processes of Dorsal and Lumbar. | 7. Posterior Meningeal Vein. |
| <i>l.</i> Spinal Cord. | 8. External Vertebral Vein. |
| <i>m.</i> Ribs. | 9. Occipital Vein. |
| <i>n.</i> Spinal Nerves. | 10. Posterior Longitudinal Veins. |
| | 11. Transverse Branches. |

FIG. III. SECTIONAL VIEW OF LOWER JAW.

- | | |
|--------------------------|-----------------------------|
| <i>a.</i> Ramus. | <i>f.</i> Coronoid Process. |
| <i>b.</i> Body. | <i>g.</i> Diplæ. |
| <i>c.</i> Angle. | <i>h.</i> Incisor Teeth. |
| <i>d.</i> Condyle. | <i>i.</i> Canine. |
| <i>e.</i> Sigmoid Notch. | <i>k.</i> Molars. |

- | | |
|------------------------------|-----------------------|
| 1. Inferior Dental Artery. | 4. Dental Branches. |
| 2. Inferior Maxillary Nerve. | 5. Anastomosis of 4. |
| 3. Inferior Maxillary Veins. | 6. Nutrient Branches. |

FIG. IV. DORSAL VERTEBRA. }
 FIG. V. LUMBAR VERTEBRA. } TRANSVERSE SECTION.

- | | |
|---------------------------------|-------------------------------|
| a. Body. | 2. Posterior Branches. |
| b. Transverse Process. | 3. Anterior Plexus. |
| c. Spinous Process. | 4, 5. Venæ Basis Vertebrarum. |
| d. Spinal Canal. | 6. Lateral Branches. |
| 1. Anterior Longitudinal Veins. | |

PLATES LVII AND LVIII.

VEINS OF BRAIN AND SPINAL CORD.

FIGS. I AND II. ANTERIOR ASPECT OF CEREBRO-SPINAL AXIS.

- | | |
|--------------------------------------|-------------------------------------|
| a. Section of Parietal Bones. | 3. Ophthalmic Vein. |
| b. Section of Occipital Bone. | 4. Middle Meningeal. |
| c. Foramen Magnum. [tebræ. | 5. Circular and Cavernous Sinuses. |
| d. Posterior Portion of Arch of Ver- | 6. Lateral Sinus. |
| e. Transverse processes. | 7. Small Cerebral Branches. |
| f. First Rib. | 8. Vertebral Vein. |
| g. Second to Twelfth Rib. | 9. Communicating Branches. |
| h. Anterior Lobes of the Brain. | 10. Vertebral Vein. |
| i. Middle Lobes. | 11. Anterior Longitudinal Vein. |
| k. Cerebellum. | 12. Anterior Branches. |
| l. Optic Commissure. | 13. Inter-vertebral Branches. |
| m. Optic Nerve. | 14. Intercostals. |
| n. Patheticus. | 15. Ascending Lumbar. |
| o. Abducens. | 16. Last Intercostals. [bar. |
| p. Motor Oculi. | 17. Termination of Ascending Lum- |
| q. Trigemini. | 18. Anastomosing Branches to Long- |
| r. Medulla Oblongata. | itudinal Veins. |
| s. Spinal Cord. | 19. Anterior Sacral. [Vein. |
| t. Intercostal Nerves. | 20. Origin of Anterior Longitudinal |
| u. Intercostal Muscles. | 21. Internal Carotid Artery. |
| v. Sacral Nerves. | 22. Middle Meningeal Artery. |
| w. Sacrum. | 23. Vertebral Artery. |
| x. Coccyx. [Veins. | 24. Intercostal Arteries. |
| 1. Branches of Anterior Meningeal | 25. Lumbar Branches to Spinal Cord |
| 2. Spheno-parietal Vein. | 26. Anterior Sacral Arteries. |

FIG. III. SECTION OF SPINAL CANAL, SHOWING ANTERIOR
 LONGITUDINAL VEIN.

- | | |
|-----------------------|------------------------------|
| a. Body of Vertebrae. | c. Transverse Process. |
| b. Arch. | d. Anterior Common Ligament. |

- c.* Same, removed to show Veins.
 1. Anterior Longitudinal Veins.
 2. Anterior Branches, Transverse.

3. Same, covered by *d.*
 4. Lateral Communicating Branches

PLATES LIX AND LX.

LYMPHATICS OF HEAD AND NECK.

- a, b, c.* Occipito-frontalis.
d. Temporal Muscle.
e. Upper Eyelid.
f. Levator Palpebra.
g. Section of Frontal Bone.
h. Frontal Sinus.
i. Eye Ball.
k. Rectus Superior of Eye
l. Rectus Externus.
m. Optic Nerve.
n. Rectus Inferior.
o. Lower Eyelid.
p. Obliquus Inferior. [Nasi.
q. Levator Labii Superioris Alaque
r. Compressor Naris.
s. Levator Anguli Oris.
t. Upper Maxilla.
u. Its Malar Process.
v. Orbicularis Oris.
w. Buccinator.
x. Glenoid Fossa.
y. Zygomatic Process.
z. Mastoid Process.
a. Tongue.
β. Sublingual Gland.
γ. Pharynx.
δ. Lower Jaw.
ε, ζ. Genio-glossus.
η. Genio-hyoid.
θ. Hyo-glossus.
ι. Stylo-glossus.
κ. Os Hyoides.
λ. Thyro-hyoid Membrane.
μ. Larynx.
ν. Thyroid Gland.
ξ. Trachea.
ο. Obliquus Capitis Inferior.
π. Trachelo-mastoid.

- ρ.* Complexus et Biventer Cervicis.
σ. Trapezius.
υ. Splenuis Capitis.
ν. Supra-spinatus.
φ. Levator Anguli Scapulæ.
ξ. Ribs.
ψ. Intercostal Muscles.
*a*¹. Frontal Nerve.
*b*¹. Infraorbital Nerve.
*c*¹. Buccal Branch.
*d*¹. Lingual Branch of Fifth Nerve.
*e*¹. Hypo-glossal Nerve.
*f*¹. Glosso-pharyngeus.
*g*¹. Sympathetic Nerve.
*h*¹. Pneumogastric.
*i*¹. Nervus Accessorius Willisi.
*k*¹. Occipital Nerve.
 1. Pulmonary Artery.
 2. Arch of the Aorta.
 3. Left Subclavian.
 4. Common Carotid.
 5. External Carotid.
 6. Superior Thyroid.
 7. Lingual.
 8. Facial.
 9. Occipital.
 10. Anterior Auricular.
 11. Temporal.
 12. Internal Maxillary.
 13. Deep Temporal.
 14. Middle Meningeal.
 15. Infra-orbital Artery.
 16. Vena Cava Superior.
 17. Innominate Vein.
 18. Subclavian Vein.
 19. Jugular Vein.
 20. Inferior Thyroid.
 21. Vertebral.

- | | |
|---------------------------------|--|
| 22. External Jugular. | 35. Temporal Lymphatics. |
| 23, 24. Internal Jugular. | 36. Lingual Glands. |
| 25. Facial Vein. | 37. Deep Lymph Vessels of the Face. |
| 26. Superior Thyroid. | 39. Deep Facial Glands. |
| 27. Lingual. | 40. Superficial Cervical Vessels. |
| 28. Facial. | 41. Superficial Cervical Glands. |
| 29. Pharyngeal. | 42. Internal Jugular Plexus. |
| 30. Meningeal. | 43. Superior, Deep Cervical Glands. |
| 31. Internal Cephalic. | 44. Inferior Deep Cervical Glands. |
| 32. Temporal. | 45. Tracheal Glands. |
| 33. Occipital Vein. | 46, 47. Inferior and superior Branches |
| 34. Occipital Lymphatic Glands. | forming the Lymphatic Duct. |

PLATES LXI AND LXII.

LYMPHATICS OF THE EXTREMITIES.

FIG. I. LYMPHATICS OF THE UPPER EXTREMITY.

- | | |
|------------------------------|--------------------------------------|
| <i>a, b.</i> Deltoid. | <i>m.</i> Radial Artery. |
| <i>c.</i> Pectoralis Major. | 1. Lymphatics of the Fingers. |
| <i>d.</i> Latissimus Dorsi. | 2. Lymphatics of the Carpus. |
| <i>e.</i> Teres Major. | 3. Dorsal Lymphatics. |
| <i>f.</i> Sub-scapularis. | 4. Superficial Vessels of Forearm. |
| <i>g.</i> Nerves of the Arm. | 5. Superficial Glands of the Elbow- |
| <i>h.</i> Axillary Artery. | joint. |
| <i>i.</i> Axillary Vein. | 6 Superficial Lymphatics of the arm. |
| <i>k.</i> Cephalic Vein. | 7. Axillary Glands. |
| <i>l.</i> Ulnar Artery. | |

FIG. II. SUPERFICIAL LYMPHATICS OF THE LEG.

- | | |
|--|-------------------------------------|
| 1. Internal Saphenous Vein. | 5. Anterior Lymphatics of the Leg. |
| 2. Lymphatics of the Ball of the foot. | 6. Internal and Anterior Vessels of |
| 3. From the Toes and Dorsum of | the Thigh. |
| the Foot. [Leg. | 7. Inguinal Glands. |
| 4. Internal Lymph Vessels of the | |

PLATES LXIII AND LXIV.

LYMPHATICS OF THE INTESTINES AND MESENTERY.

- | | |
|-------------------------------------|----------------------------------|
| <i>a.</i> Abdominal Walls—Anterior. | <i>h.</i> Ileum. |
| <i>b.</i> Last Dorsal Vertebra. | <i>i.</i> Mesentery. |
| <i>c.</i> False Ribs. | 1. Abdominal Aorta. |
| <i>d.</i> Transversalis Abdominis. | 2. Vena Cava Inferior. |
| <i>e.</i> Quadratus Lumborum. | 3. Lacteals of Small Intestines. |
| <i>f.</i> Duodenum. | 4. Mesenteric Glands. |
| <i>g.</i> Jejunum. | 5. Thoracic Duct. |

- | | |
|---|---|
| 6. Division and Plexiform Inter-
lacement of 5.
7. Inter-costal Glands.
8. Their Trunk which joins with 5. | 9. Posterior Mediastinal Glands.
10. Duct from the Inter-costal
Glands.
11. Their Duct to the Thoracic Duct. |
|---|---|

PLATES LXV AND LXVI.

LYMPHATICS OF THE ABDOMEN.

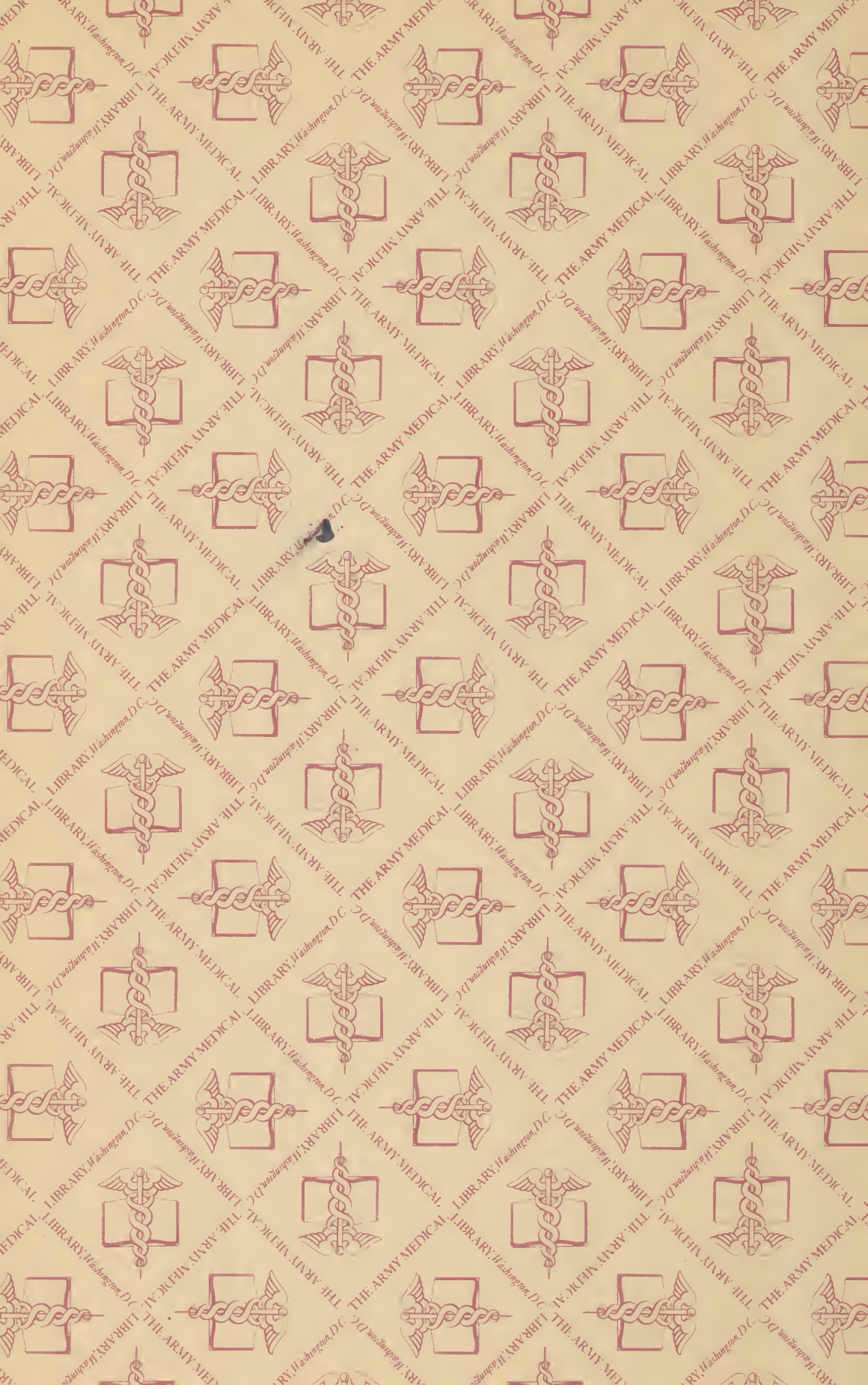
- | | |
|---|---|
| <i>a.</i> Eleventh Dorsal Vertebra.
<i>b, d.</i> Ninth to Eleventh Rib.
<i>e.</i> Fifth Lumbar Vertebra.
<i>f.</i> Sacrum.
<i>g.</i> Crest of the Ilium.
<i>h.</i> Pubes.
<i>i.</i> Abdominal Wall, Reflected.
<i>k.</i> Iliacus.
<i>l.</i> Quadratus Lumborum.
<i>m.</i> Psoas Muscle.
<i>n.</i> Transversalis.
<i>o.</i> Liver.
<i>p.</i> Spleen.
<i>q.</i> Kidney.
<i>r.</i> Supra-renal Capsule.
<i>s.</i> Ureter.
<i>t.</i> Bladder.
<i>u.</i> Uterus.
<i>v.</i> Fallopian Tube.
<i>w.</i> Fimbriated Extremity.
<i>x.</i> Ovary.
<i>y.</i> Broad Ligament of Uterus.
<i>z.</i> Rectum.
<i>α.</i> Branch of last Dorsal Nerve.
<i>β.</i> Branch of First Lumbar Nerve.
<i>γ.</i> Branch of Second and First
Lumbar.
<i>δ.</i> Branch of First Lumbar—right
side.
<i>ε.</i> Branch of Second Lumbar—same
<i>ζ.</i> Crural Nerve. [side.
1. Abdominal Aorta.
2. Celiac Axis.
3. Splenic Artery.
4. Superior Mesenteric.
5. Renal Artery.
6. Spermatic Artery.
7. Inferior Mesenteric. | 8. Sacra Media.
9. Common Iliac.
10. Femoral.
11. Internal Iliac.
12. Ilio-lumbar.
13. Inferior Lumbar.
14. Circumflex Iliac.
15. Epigastric.
16. Internal Pudic.
17. External Pudic.
18. Branch to Fallopian Tube from
Spermatic.
19. Branch of same to Fundus Uteri.
20. Ovarian Branch of Spermatic
21. Vena Azygos. [Artery.
22. Vena Cava Inferior.
23. Supra-renal Vein.
24. Renal Vein.
25. Spermatic Vein.
26. Plexus Pampiniformis.
27. Common Iliac Vein.
28. Middle Sacral.
29. External Iliac.
30. Circumflex Iliac.
31. Epigastric.
32. Internal Iliac.
33. Vaginal Branch of 32.
34. Splenic Vein.
35. Superficial Lymphatics of Thigh
36. Superficial Lymphatics of Hips
and Gluteal Region.
37. Inguinal Glands.
38. Circumflex Iliac Lymphatics.
39. Superior Iliac Glands.
40. Ilio-lumbar Lymph Vessels.
41. Epigastric Plexus.
42. Sacral Plexus.
43. Internal Iliac Plexus. |
|---|---|

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|------------------------------------|---------------------------------------|
| 44. External Iliac Plexus. | 51. Splenic Lymphatics. [phatics. |
| 45. Lumbar Plexus. | 52. Superficial and deep splenic lym- |
| 46. Spermatic Lymphatics. | 53. Pancreatico-splenic Plexus. |
| 47. Supra-renal. [neys. | 54. Superficial Lymphatics of Liver |
| 48. Superficial Lymphatics of Kid- | 55. Right Lumbar Trunk to Thoracic |
| 49. Trunks of Superficial and Deep | Duct. |
| Lymphatics of the Kidney. | 56. Left Lumbar trunk to Thoracic |
| 50. Colic Plexus. | 57. Thoracic Duct. [Duct. |

PLATES LXVII AND LXVIII.

MAIN TRUNKS OF LYMPHATIC SYSTEM.

- | | |
|-----------------------------------|--------------------------------------|
| a. Cervical Vertebræ. | 8. External Jugular. |
| b. Dorsal Vertebræ. | 9. Internal Jugular. |
| c. Lumbar Vertebræ. | 10. Subclavian Vein. |
| d. Ribs. | 11. Cephalic Vein. |
| e. Clavicle. | 12. Basilic Vein. |
| f. Crest of Ilium. | 13. Scapular Veins. |
| g. Sacrum. | 14. Vena Azygos. |
| h. Superior Ileo-lumbar Ligament. | 15. Intercostal. |
| i. Iliacus. | 16. Superior Intercostal—right side. |
| k. Psoas. | 17. Intercostal Veins. |
| l. Transversalis. | 18. Muscular Branches. |
| m. Quadratus Lumborum. | 19. Lumbar. |
| n. Latissimus Dorsi. | 20. Ascending Lumbar. |
| o. Intercostals. | 21. Ilio-lumbar Vein. |
| p. Subscapularis. | 22. Sacral Plexus Lymphatic. |
| q. Brachialis Anticus. | 23. Internal Iliac Plexus. |
| r. Biceps. | 24. External Iliac Plexus. |
| s. Coraco-brachialis. | 25. Superior Iliac Glands. |
| t. Pectoralis Major. | 26. Lumbar Plexus. |
| u. Deltoid. | 27. Branches from the Renal Plexus |
| v. Pectoralis Minor. | 28. Left Lumbar Trunk. |
| w. Trapezius. | 29. Right Lumbar Trunk. |
| x. Levator Anguli Scapulæ. | 30. Thoracic Duct. |
| y. Scalenus Anticus. | 31. Intercostal Lymph Vessels and |
| z. Longus Colli. | Glands. |
| α. Lumbar Nerves. | 32. Deep Lymphatics—Upper Ex- |
| β. Crural Nerves. | tremity. |
| γ. Obturator Nerve. | 33. Left Thoracic Lymphatics. |
| 1. Subclavian Artery. | 34. Axillary Glands. |
| 2. Vertebral Artery. | 35. Subclavian Trunk. [Group. |
| 3. Axillary Artery. | 36. Deep Cervical Glands—Inferior |
| 4. Intercostal Arteries. | 37. Trunk from Superior Deep Cerv- |
| 5. Lumbar Arteries. | ical Glands. |
| 6. Innominate Vein. | 38. Jugular Lymphatic Trunk. |
| 7. Vertebral Vein. | 39. Right Lymphatic Duct. |



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